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INTERVIEW

WITH MR. R. T. JEFFERY OF THE H.E.P.C.

RE: HYDRO RATES

CMP. 23rd August, 1922.

MR. H. T. JEFFERY OF THE H.E.P.C. APPEARED BEFORE THE INQUIRY COMMISSION TO EXPLAIN HYDRO RATES.

The H.E.P.C. is a body appointed by the Provincial Government to act as trustees for the municipalities in the operation of their Hydro systems in getting power at cost. They act as trustees for the cooperative partnership of the municipalities in connection with the operation of their power scheme. The Commission's entire jurisdiction of trusteeship is controlled by the Power Commission Acts and all of the powers with regard to fixing of rates, etc., is set out and determined in certain clauses or sections of that Act. That Act has been changed from time to time to meet such conditions which were found not to be met by the Act as originally drawn. Each municipality entering into the partnership scheme submits a by-law to the ratepayers, and if the by-law passes them they enter into a contract with the Commission.

Q. The Statute provides that the estimated rates shall be mentioned in the by-law. Why does the Commission object to these being put in the by-laws ?

A. They are always put in the by-laws.

Q. No, they were not published in the Port William by-law. Pt. William was expressly advised by the H.E.P.C. that these estimates would not be published with the by-law.

A. Probably it was because of the length of the printed document.

Q. We saw a pencil sketch given by the Hydro man (Espenschied) sent up there to speak for the Hydro and that was all they had. They were not long. They received a telegram from Mr. Pope not to publish them with the By-law.

A. Well, if the rates were published, it would not have made much difference, except for the first year...

Q. But you said they were always published and here is a case where they were not.

A. I would rather have Mr. Pope answer this, but my understanding of the reason why they are not published is on account of the length of the by-laws.

RAR -As far as you are concerned you would make out for each municipality the rates from the data supplied to you from the accounting department, engineers and your superiors ?

A. Yes.

Q. Did you make out the rates for Nipigon ?

A. Yes, at least my staff did. I did not have full charge of my department at that particular time. As to the last rates submitted -- the estimates for power as supplied from the Nipigon plant -- I made them out. These last rates were sent up some months ago.

RAR -Do you makes the rates as between the Hydro and the municipality and do you always check over the rates as fixed by the municipalities to the customers ?

A. Both.

Q. The Hydro billed Port Arthur $25.00. You sent those rates up to them ?

A. Yes.

The Commission in connection with the By-law submits an estimated rate at which power can be supplied to that particular municipality based on the amount of the load the municipalities in that System are taking, and on the other conditions which would affect the cost. Later, after that municipality is operating for a while, its load may increase beyond the amount on which the first estimate was based and in that case, the cost per h.p. will drop. We try to be conservative and base our rates on a careful estimate of what the town will use. Sometimes through fires the town has not been able to make up the load. Our capital would, of course, remain the same and therefore the cost per h.p. would go up. This is merely one of the incidentals.

Q. You say the rates go into the contract and in the by-laws but not in the published by-law ?

RAR- You make a distinction between the by-law and the published by-law?

A. Perhaps I am wrong. There is one by-law but that by-law does not as published include all of the contract. It refers to the contract but does not include all of the contract when published.

Q. The estimates seem to me to be a very vital part of the contract and the statute provides it must be contained in the by-law. Mr. R. A. Ross stated that perhaps a by-law with regard to a radial might be especially long but the estimated rates should not occupy much space. "The estimates rates are essentials."

Each system is considered as a separate unit in connection with the matter of cost or the matter of wholesale rates...

Q. But when they are interchanging power ?

Q. Did you make out the rates for Pigeons ?

A. Yes, at least my staff did. I did not have full charge of my departments at that particular time. As to the last rates transmitted -- the setting up for power to be supplied from the Pigeon plant -- I made them out. These last rates were sent up some months ago.

Q. Do you make the rates as between the Hydro and the municipalities and do you always check over the rates as fixed by the municipalities in the contracts ?

A. Both.

Q. The Hydro bills Port Arthur $32,00. You sent those rates to them ?

A. Yes.

The Commission in connection with the by-law submitted to the electorate with which power can be supplied to that particular municipality based on the amount of the load the municipality in that division was taking, and on the other conditions which would affect the work. Later, after the practicability in operating for a while, the load may increase beyond the amounts on which the first estimate was based and in it case, the Port H.P. will drop. We try to be conservative and make our rates on a general basis so that the term will run. Sometimes through the town's not being able to make up the load. Any capital would, of course, remain the same and therefore the cost per h.p. would go up. This is merely one of the considerations.

Q. You say the rates go into the contract and in the by-law but not in the Published by-law ?

Mr.- You make a distinction between the Contract and the Published by-law ?

A. I'm sorry. There is one by-law and that by-law does not be published include all of the contracts. It refers to the contracts but does not include all of the contracts when published.

Q. The estimates seem to me to be a very vital part of the contract and the statute provides it must be embodied in the by-law.

Mr. H. A. Dean stated that perhaps a by-law with regard to rates might be sufficiently long but the estimates rates should not be a very small figure. The estimates rates are essential."

Such system is considered as a reputed wall in connection with the matter of cost or the matter of which one person...

Q. But when they are interchangeable power ?

A. We have a few systems interchanging power, but when the interchange power that power is sold by the one to the other and each one gets credit for the power which it sells to the other

Q. And do you think it is advisable to keep them distinct so that one side of the road may pay a certain rate and the other side of the road another rate ?

A. Yes, I do, and you can't get away from the condition which you mention (rate difference for adjacent premises) for you will have in one system higher rates than in the other a short distance away. There are physical conditions of this kind which you have to follow and you must take them as they are.

So each System is considered a separate unit, in the matter of rates. According to the Act power must be supplied at cost to the municipalities. The cost of power is made up as follows:

(1) Operation - includes salaries of operators, patrolmen superintendents, office expenses, engineering, auditing, billing and collecting.

(2) Maintenance - includes cost of keeping plant in operating order; ordinary wear and tear on the plant; salaries of maintenance men and the cost of the materials used by them.

(3) Interest - includes interest on the capital invested at the rate at which the money was borrowed. The money borrowed by the Provincial Government on the Hydro account is at varying rates and the interest rate charged in the cost of power is the average rate on the money the Commission has obtained from the Government....

Mr. R. A. Ross asked how they would calculate the interest rate when for the bonds issued say the Government got only 90 and yet had to pay interest on 100. The sinking fund must be paid on 100 cents to the dollar and 1.8% over the number of years will not pay it back when they did not get par for the bonds.

Q. The rate you charged on Nipigon was 5%

A. 5% is the approximate average that the Commission pay on moneys borrowed from the Government.

Q. But according to the auditor, the money advanced for that particular job averaged 6.2% whereas the average for everything was 5%.

A. 5% was the average up to the time of our computation but we don't forecast.

A. We have a few systems interchanging power, but when the interchange power that power is sold by one to the other and both are getting credit for the power which it sells to the other.

Q. And do you think it is advisable to keep them distinct so that one side of the road may pay a certain rate and the other side of the road another rate?

A. Yes, I do, but you can't get away from the condition that you mention that differences in adjacent districts for you will have in one system higher rates than in the other a short distance away. There are physical conditions of this kind and do you have to believe and you know how they are.

In each system is considered a separate unit, is the matter of rates. Accordingly is the rate power must be supplied at cost to the municipalities. The rate of power is made up as follows:

(1) Generation - Includes salaries of operators, repairs on equipment, office expenses, engineering, auditing, billing and collecting.

(2) Distribution - Includes cost of keeping plant in operating order, ordinary work and care on the plant; salaries of maintenance men and the cost of the materials used by them.

(3) Interest - Includes interest on the original investment at the rate at which the money was borrowed. The money borrowed by the municipal government on the City account is at varying rates and the interest rate charged in the cost of power is the average rate on the money the Commission has obtained from the Government....

Mr. H. Jones asked how they would calculate the interest rate when for the funds issued by the Government for only 30 and you had to pay interest on 100. The witness that was he paid on 100 at the dollar and 1.8% over the number of years will not pay it back when they did not pay for the bond.

Q. The rate you charged on Tipton was 8%

A. 8% is the approximate average that the Commission pay on money borrowed from the Government.

Q. Was consideration to the audit, the money advanced for that particular job averaged 6.8% whereas the average for everything was 8%.

A. 8% was the average up to the time of our amalgamation but we didn't foresee.

Q. Shouldn't you provide for the interest rate for that particular year ?

A. No, we take the average interest rate on moneys borrowed in previous years.

Q. Why take previous years ?

A. Because we have capital that was purchased with money borrowed at different rates of interest during previous years, which...

RAR: We will say that the System borrows $1,000,000. at 5% and this is expended up to 1921 and in 1921 you borrow the same amount at 6%. At the end of 1921 the average rate will be 5½%.

MJH: But in connection with Nipigon you have gone one step further. You have discounted the future to the extent of only charging 5% on your money instead of 6.2%, which was the actual cost.

A. Except for the additional plant that may have to be installed.

MJH: No, but for the plant that is installed already, which is based upon a 5% interest rate instead of 6.2%.

A. But if the plant in the Nipigon development is averaged with the whole Commissions plant it will be less than 6.2%.

MJH: That is conflicting with the statement that each System stands on its own bottom.

RAR: Any rate you apply to Nipigon you apply to Niagara ?

A. Yes. I would not say that with regard to Chippawa. I don't know what policy will be followed there.

Q. Your statement is quite in conflict with that made to Mr. Clarkson. He was told that the Government said they would just charge the Hydro that rate for that year.

A. That is quite possible. If Nipigon is considered as a separate unit as regards money borrowed then the money would be at 6.2% or whatever it was during that year. If it is averaged it will be lower.

Q. But you said you average all the plants.

A. Yes.

Q. Then if Wardell's was less than 5% it will have to be raised to 5%.

A. Yes.

RAR: Weren't you told when you made your $25. rate for Port Arthur the interest rate was to be 5%.

A. Yes (in effect - I have to do as I am told-)

Q. Shouldn't you provide for the interest rate for that particular year ?

A. No, we base the income interest rate on money borrowed in previous years.

Q. Any back previous years ?

A. Because we have capital that was purchased with money borrowed at different rates of interest during previous years, which...

MR. We will say that the bonds currently in 1,000,000. at 5% and this is compared up to 1951 and in 1951 you borrow the same amount at 6%. At the end of 1951 the average rate will be 5½%.

MR. But in association with Kingston you have made one step further. You have discussed the matter to the extent of only supplying 5% on your money instead of 6.5%, which was the original cost.

A. Except for the additional plant that may have to be installed

MR. No, but for the plant that is installed already, which is based upon a 6% interest rate instead of 6.5%.

A. But if the plant in the Kingston development is averaged with the whole Commissioners plant it will be less than 6.5%.

MR. That is complicating with the statement that each System stand on its own bottom.

MR. Any rate you apply to Kingston you apply to Kingston ?

A. Yes. I would not say that with regard to Dalhousie. I don't know what policy will be followed there.

Q. Your statement is quite in conflict with that made to Mr. Clarkson. He was told that the Government said they would just charge the Hydro that rate for that year.

A. That is quite possible. If Kingston is considered as a separate unit as regards money borrowed then the money would be at 6.5% or whatever it was during that year. If it is averaged it will be lower.

. But you will not average all the plants.

A. Yes.

Q. When if Dalhousie's rate lower than 5% it will have to be raised to 5%.

A. Yes.

MR. Doesn't you think when you make your 5% rate for Port Arthur the interest rate was to be 5%.

Q. (In effect - I have to go on as I am told.)

MAR: Up to the time of Nipigon and Chippawa you practically had been averaging your interest charges. The money all comes from one pocket.

Chairman: I don't think Mr. Jeffery is correct.

MAR: The Government, we will say, are issuing $10,000,000 in one lot and they are handing this over to the Hydro, and the Hydro are using it on the many different systems. Other sums will at different times be put into the capital expenditures on the different systems and at other rates of interest, so it seems necessary to average the interest rates.

JAR: Beck in his testimony before the Waterways Commission states this in effect.

Chairman: This high rate of interest paid on Chippawa will throw a great burden on the smaller plants.

A. Yes, and that is why I say there may be something different done with respect to Chippawa.

Chairman: On Nipigon you made out estimates at 6% and then changed to 5%. Why did you change them from 6 to 5% ?

A. We have estimated upon two different rates, but why I cannot say. I just make up the estimates on these bases as I am instructed. We have a standard rate for each different item of expense...

MJH: I want to know whether you get out all these figures from definite instructions from your superiors upon which you base your "power at cost" in connection with interest ?

A. No. All of the Systems up to date have been based on the average rate of interest for all the money borrowed from the Government - excepting Chippawa and Nipigon

Chairman: You charged Wasdell's just the same as you charged Eugenia or the Niagara ?

A. Yes. I do not know the rate for Wasdell's without looking it up.

(4) <u>Sinking Fund</u> - In the cost as estimated is included sinking fund to retire the debentures which have to be issued or money borrowed to pay for the construction of the plant, lines and stations. The moneys which we borrow are on the basis of 30 years and the sinking fund is charged at the rate of 1.6%. Each municipality, according to the Act, commences to pay sinking fund at the end of the fifth year of operation. That is, in the sixth year of their operation they pay the first year's sinking fund. The idea was to give the municipalities a chance to build up their business and get on their feet. In regard to the inclusion of sinking fund charges in the cost of power is where the Hydro differs from private schemes.

R.A.R: When you issue 30 year bonds and they compound that at 4%, you get 1.6% sinking fund. When you issue 40 year bonds you get down to 1%. When you defer payment for five years you are really amortizing that - not in 30 but in 25 and 35 respectively. I don't understand where you manage to make up the account at the end of the term.

Chairman: I would like to have the figures on which Mr. Jeffrey based the $25 rate for Port Arthur.

(5) Depreciation - an amount set aside to replace the worn-out and obsolete plant. That is, the plant does not last for the length of the life of the debentures - 30 years.

R.A.R: Your renewals include not only your yearly repairs but an amount set aside so that, when large replacements take place, they are paid for out of that item, so that at the end of thirtyyears you then have so much value in your plant originally, depreciated year by year and, when you put your cash in on top of that, your investment is made whole at that time ?

A. Supposing a line of poles rot down at the end of twelve years, we have this fund to put in new poles at that time.

(6) Contingencies - or an insurance fund. The Commission fixes that charge. A cyclone may come along and blow down a mile or so of line and poles ..... No special percentage is fixed for this fund, it is an arbitrary amount fixed for each system by the Commission. Sometimes it is so much per horse power developed. Mr. Pierdon could tell you about that. Into that fund goes any extraordinary revenue which we might obtain. For instance, we had an aluminum line supplying a certain district where the expected loads did not materialize and we took down this aluminum line and substituted cheaper. Aluminum now was high in price and the surplus from the sale of it went into the Contingent Fund.

J.A.R: Repairs does not come under depreciation ?

A. No, except any large item like the rotting off of a pole. That is a renewal, not a repair. It is somewhats difficult to distinguish between renewals and maintenance sometimes. Some public ownership commissions combine the maintenance and depreciation, and after

they got a certain percentage of their capital set up in a fund of depreciation, they stop setting it up on a percentage basis and only set up renewals actually made. I believe the New York State Commission stated in regard to the New York Telephone Company's adjustment of rates that 30% was high enough to go in a depreciation fund. We have towns that, in ten years' operation, have reached almost 30% of the value of their local distribution systems - set up on their books - and they have reached a point where it is getting a rather serious matter and it looks as though the Commission will have to adopt some new policy as regards These towns will have to grade it off at a lower rate.

Chairman: If the system is running behind do you cut down ?

A. No. It still stands. We show the net profit and net loss and we.....

Q. But in Wasdell's the renewal rate was reduced.

A. Yes, the rate for that particular system was too high.

Q. We are told that Wasdell's is running behind.

A. No. Wasdell's system while it has not got all of its debts paid off - it still owes the H.E.P.C. moneys on account of deficits for back years - but this year Wasdell's is on its feet and is paying back...

Chairman: They borrowed from Renewals last year; the accountant showed us that....

A. The renewal rate was reduced because it was figured that rate was too high. This year the system was on its feet.

MAH: In estimating rates you are given the rates to charge ~~xxf~~ for interest, sinking fund and contingencies - these are a ~~xxxx~~ question of policy ?

A. Yes; we have (The Commission) a schedule of depreciation rates. The life of a transformer, a pole line, wire, sub-structures, generators, etc. is different and the depreciation rate for each item must differ. When we know the value of the different items in a particular system we can figure out the average depreciation rate for that system. For the Niagara System the average is 2½%; Wasdell's 2½% Eugenia 2.75%; Severn 2.75%; St. Lawrence 3%; Muskoka 4½%; Thorold 2½%; Thunder Bay 3½%. They vary according to the capital invested in each particular class of equipment. Depreciation on sub-structures, dams, etc. is low.

That we have already discussed is the cost to the municipality. The cost to the consumer is made up of three principal items: generation, transmission; distribution.

(1) Generation - the cost for power generated or power purchased. The first power supplied by the H.E.P.C. was purchased at 12,000 volts and we had to step it up to 110,000 volts.

The cost of power at the generating plant is the same for all municipalities on that system. The transformer station to step up the first power bought from the C.P.C. was built by the Commission. The cost of the first power from the C.P.C. did not therefore include the cost of transmission. The C.P.Co. at that time stepped up to 30,000 and 60,000.

The cost of the power is the same to all municipalities at the generating busbars or outlets. The cost of the transformer station at Niagara Falls is borne by the municipalities in proportion to the use made by each of the capital invested in that station. It is split in accordance with the average horsepower supplied during the year - the carrying xxxx charges. All of the transmission lines used in common are allocated to those municipalities taking power over those lines in direct proportion to the amount of power for the year. These are made up at the end of the year and allocated to the various municipalities.

That estimated rate which was submitted to each municipality is an estimated rate only and it is on the basis of that estimated rate that 12 monthly bills for power are submitted. At the end of the year when the Commission know all the items entering into that cost then the actual cost can be arrived at by the accountants and a thirteenth bill is submitted to each municipality, which may be in the form of a xxx debit or a credit. If it is a debit bill, the municipality must send us a check. If it is in the form of a credit, the municipality is advised as to what that credit is and this is deducted from succeeding power bills until it is used up. As this thirteenth bill cannot be made up until three or four months xxxxx after the closing of the fiscal year the municipalities are allowed interest on their credit balances.

JAS: The Commission pay from 50¢ to $1.50 per h.p. for water rights. That is part of the cost of power ?

A. Yes, that would really come under operation. That is an arbitrary amount set by the Government.

Mr. Jeffrey drew a comparison between Chippawa, 4 miles from the generating station and taking 60 h.p. and Windsor 140 miles away and taking 7,000 h.p. The rates respectively are $38. and $35. This rate looked high for the village, considering its nearness and the fact that the cost to each was the same at the busbars ed the generating station. He pointed out that a wood pole line is quite satisfactory to transmit 1,000 h.p. for 30 miles and likewise satisfactory for 1/10th of that power. A slight difference would occur in the cost of lighter wire for the smaller amount of current. The cost of the pole line would be the same for each load and therefore it can be seen that the average cost per horsepower for the larger load is much smaller than for the smaller load. Power is delivered to the municipality at 12,000 volts and the municipal transformer station steps it down to the required 2200. As the Chippawa load increases its price will drop. The long transmission line to Windsor is shared by London, ~~xxxxxxxxxx~~ St. Thomas and many other municipalities and Windsor's share is thus cut down.

At this point is where the argument might come in for flat rates. There has been considerable agitation from some of the municipalities - certain citizens of Goderich for instance - for flat rates for the whole of the Province. These are towns far from the source of supply. The question of a zone rate has also come up.
We have had to deal with three kinds of rates and we have adopted the one I have described - <u>the measured rate</u>.

It has been suggested that all of the power in the whole Province should be lumped together and supplied at one rate to everybody - to Niagara Falls the same as to Windsor. According to the Act the Commission cannot do anything other than we are doing. It would mean the cancellation of all the contracts and the taking over of the whole scheme by the Government and using it as a Government scheme.

Q. Why would it have to be taken over by the Government ?

A. If the present contracts were cancelled and all of the rates are averaged would the City of Niagara Falls sign ? Would the municipalities that were going to have to pay part of the other fellow's cost sign a contract and enter into such a scheme ?

Chairman: If they would do it for the Government, they would do it with you.

A. It would have to be made compulsory for if a lot of municipalities dropped out it would double the cost to the others, probably.

Q. Where would they get the power, if not from you ?

A. They would not have any other source, outside of steam. I think this scheme would be impracticable.

MAR: It seems to me the situation is this; there must be some supreme authority to handle this; either it must be the Government or the municipalities. If it is the Government, it will become a Government matter and all pressure would be brought by little places away out for power. On the other hand with the municipalities in supreme authority the policy would be to keep everybody off but themselves so that there would be difficulties both ways. The objections are almost insurmountable.

Q. The municipalities are not liable for the capital cost ?

A. Yes, they are.

Q. At Nipigon they can't supply the cost and the Province will have to make that up and the rest of the Province will have to pay their share.
The municipalities guarantee interest and sinking fund in their rates. Do they not also in the contract guarantee the financial outlay ?

PWW: In their contract they agree to pay for power at cost and that is about all it amounts to.

Q. Take the Niagara System or any other System outside of Nipigon. Those municipalities in their contracts agree to pay cost whatever it is. If they take only one horse power they must pay the cost and they are liable and until they are unable to meet that the Government is not responsible at all.

Q. You billed Port Arthur with very much less than cost last year and the Government will have to put up that deficit.

A. I think in the case of Port Arthur that will work out all right.

Q. It may in time.

MAR: When the municipality guarantees to pay interest and sinking fund isn't that sufficient guarantee a definite guarantee ?

Chairman: It is like a man who endorses a note and finally has to pay it. The Government has been more than banker for bankers as a rule do not guarantee.....

MJH: You can sell to corporations outside of the municipalities ?

A. We do not make contracts with any private companies where we have to spend money, without a bond. Some contracts were made in the past without bonds.

Mr. Jeffrey stated that the Commission expected to get enough load on the Chippawa plant this fall or next spring to carry the cost. The rates on the Niagara System were increased this year approximately $4 per h.p. to meet the increased cost of Chippawa. He did not anticipate it would be necessary to increase further. If the increase made is found insufficient the deficit will appear in the 18th bill.

FWW: You are going to allow another five years' deferring of sinking fund payments ?

A. I believe that is a matter of policy which has to be decided as to the deference.

FWW: That is to say each of those municipalities on the Niagara System has had its sinking fund deferred 5 years and will now get another 5 years' deference ?

A. No, it is a matter now whether on this $60,000,000 of capital expenditure on Chippawa the municipalities will be allowed five years' deference on sinking fund. This five years' deference is on the Chippawa capital only. Chippawa is an extraordinary expenditure for the Niagara System.

Returning to the subject of flat rates, Mr. Jeffrey said that the H.E.P.C. now supplies practically all of the larger municipalities (where there is not competition). Under this flatrate scheme, if it was operated by the Government, remote towns could claim power and each addition would increase the cost to the others. The thing would not be left on a stable basis.

Regarding the Zoning System; it has been suggested that power should be supplied at the same rate to each particular zone. We will say there was a zone immediately around London, another immediately around Chatham, another around Sarnia and another around Windsor, Port Arthur, etc. The idea is to charge the same rate to all for the power delivered in a particular zone. Now take the Niagara System, for example, and you would have zones around London (and you would supply the towns in the London zone at the same rate), St. Thomas zone at another rate, Woodstock zone at another rate, Brantford zone at another rate, and Hamilton-Dundas zone at another rate. If you had zones you would have the same conditions as today except in a little different form. You would

have two towns located very close together but in different zones and the difference in the prices might be $5 per horsepower. You would have instead of fifteen systems about one hundred. There is a physical limit where you can supply power at cost.

Mr. Francis: The present system would seem to give a systematic way of getting at cost whereas the zoning system would be an arbitrary thing within the zone. With respect to each other there would be no material connection in transmission lines.

Chairman: Port Arthur is the sole municipal backer of the Thunder Bay System and it has mortgaged itself. Would it be fair to sell power at Nipigon cheaper than at Port Arthur and thus draw industries from the municipality which has established the development to Nipigon? Wouldn't it be fair to Port Arthur to say that no place within the zone shall have power at a lower rate than Port Arthur ? Isn't there some sound ground for that ?

A. Yes, there is an argument in favor of that and the Nipigon System is a special condition.

Mr. Francis: On the other hand Mr. Jeffery has indicated two municipalities on the same Niagara System, Chippawa and Windsor, where the rates are practically the same from the same generating plant, so it does not necessarily follow that a customer at Nipigon would not get the same rate as at Port Arthur. Mr. Jeffery has explained that the electrical connections are different. It might so happen that by this system the customer at Nipigon would pay the same as the customer at Port Arthur.

Q: Take the Town of Orangeville, is there any physical reason why it should not be connected with the Niagara System ?

A: It is only a matter of arbitrary decision of the H.E.P.C. that it is joined to the Eugenia System.

Q: But it pays a much higher rate than it would on the Niagara System ?

A: I doubt very much if power could be supplied to Orangeville from the Niagara System as cheaply. There would be a long line to build even from Georgetown or Fergus or Bolton.

Q: But as between Harriston and Mount Forest ?

A: We made an estimate of the cost of power as supplied to Harriston and Palmerston coming from Eugenia and also from the Niagara System and we were considering connecting across from Harriston to Mount Forest. If you consider one municipality alone when you are making your estimates you might arrive at a calculation which would show that the cost of power to that particular municipality would be lower from some other system, whereas you have to consider the length

of the lines and the point from which the power is supplied in connection with the whole number of municipalities that you have to serve.

Q. If you run into would you still treat Eugenia, Severn and Baldells as separate systems?

A: It is difficult to say whether those three should be left as separate units or combined as one unit.

Q: Hasn't the matter of unifying the 60-cycle systems been considered?

A: It has been under consideration but I don't know that it would work out. We would like to see them connected up but we would have some difficulty arranging these rates. The difficulties are not easy to explain.

Q: What about diversity ?

A: Some months we have no diversity. In the summer months we have as much as 15%. On the Niagara System this diversity offsets line loss on our main transmission line.

Q: Are you able to use that 15% in the summer months? Is it of any particular value to have that ?

A: Yes, it cuts down the cost of power. If you are buying 100,000 h.p. on a contract and you have two towns that use in the winter months 90,000 h.p. and in the summer months 80,000 h.p. their cost of power would be less.

Q: It strikes me that if you are buying a fixed amount of power the diversity would not be a saving to you.

A: No.

Q: Have you any contracts whereby if you do not require the power you do not have to take it ?

A: Yes, from the Toronto Power Co., and from the Canadian Niagara. We did not take the power if we did not use it.

The next item in the cost of power to the consumer is <u>Distribution</u>. While the Commission has charge of the operation, maintenance, etc., of the generating plants, and the transmission lines to the limits of the municipality, they do not operate or control the distribution within the limits of the municipality, except in a few of the smaller Central Ontario towns. The Central Ontario is owned and paid for direct by the Province and is operated by the Commission for the Government. We operate it just like a Company and we balk all of the profits. The same applies to the Essex System. The B.H.E. bought that

This service charge covers interest and sinking fund, maintenance, operation and other charges on the capital cost of the lines which we have installed for that particular customer whether he uses that power or not. There is no power charge in it but that service charge is supposed to take care of all the charges if he stopped taking power. If we had only a meter rate we would get no revenue and we would be out that much money.

Do you think it is fair to charge the same service charge to a man with 500 h.p. as to the man with 5 h.p.

A. Yes, the rate is the same for each h.p.

Next comes 2.11¢ per k.w. hour for the first 50 hours' use per month of the maximum monthly demand. For the second 50 hours' use we charge him 1.33¢ and that does not mount so fast. We figure that on 130 hours' use per month a man with a ten-hour load factor of 50% will pay cost. In other words 523. is at the point of 130 hours' use at the bottom of the curve. Anything we get over 130 hours is lower than cost and we put on a low rate of .15¢ for the remainder which takes care of loss of diversity which we haven't on his load but on the other fellow's load.

Distribution - Our costs to the town are figured in the way which I have explained. The cost to the town does not determine altogether the cost to the consumers in that town. You may have a diversity of load--selling the same power to two or three people-- and you may have a better management or a compact or scattered system and an expensive distribution. You may have to set your poles in rock or in sandy soil. All those items enter into the cost to the consumer. For St. Thomas the rate was $25. and the rate to the consumers was only $17. Port Credit $23 and $25; Dashwood $56 and $57.

In figuring the rates we cannot get a standard to apply to all towns. Each town has its own special characteristics and must be considered individually.

Adjourned until 10.45 24th August (Thursday).

HYDRO ELECTRIC INQUIRY COMMISSION

TORONTO 24th AUGUST, 1922.

RESUMED

H.T. JEFFERY:

I explained how the cost of generation and transmission were subdivided, and I was starting in on the subdivision of distribution cost among the various municipalities, and in connection with that I was starting to explain the different rates for different classes of service. I explained the chart, which I showed you, the scheme of power rates for power customers, and possibly before going into the matter of showing how we calculate the cost of service to each particular class; - that is lighting and power and street lights and street railway and water works - and it might be well to explain the form of rates we have for commercial lighting and domestic lighting, and then I will have completed the explanation of all the different form of rates for each particular class of service.

The matter of power rates I have explained the public service charge and the graded kilowatt-hour rate. It starts off with $1 per month per horse power of connected load or maximum demand. Then for the first 50 hour use of the load per month it is at a certain rate, perhaps 2¢ per kilowatt-hour and for the second 50 hour use at a lower rate, and for all over that at a lower rate still.

THE CHAIRMAN: That is for domestic? A. All for power, I am speaking of power now. The idea being that these curves are so calculated that on the basis of 50 hour use your customer has paid the cost, then all over that is the amount above cost which he pays on account of being a long hour user, and not having the same diversity load. This ten hour user would use his power from seven in the morning till six at night; after that in the winter months it could be used for lighting, and in the winter there would be some overlapping from five till six.

THE CHAIRMAN: Fifty hours per month seems very low? A. I said 150, it should be 130. He will have a load factor of 30% for ten hours per day; that is what the ten hour user would use, about 150%. We have to start with something, and we decided to start with the ten hour user with 50%. With that as a basis we have made the other rates so that there is some connection between the different classes. The 24 hour user pays that rate with no discount, the ten hour user gets 10% discount. Then we have what we call off-peak power; the man who uses Class A. power or 24 hour power and keeps his load off our peak during certain hours when our peak is on, and this man for different months in the year will get another 10% off his bill for keeping off the peak during these hours, and these hours vary for different months in the year.

Q. How do you know at what time he is using power? A. From his meter, he has a graphic meter, and we can tell when he comes

on and when he goes off. We can tell at any time he has been on our peak, and if he is on the peak he loses his discount for the whole month, that is if he is on the peak for one day. These are our meters and we have the charts.

Q. Has he got to pay the minimum of 150 hours a month? A. No he pays a service charge of $1. per h.p. per month, that is his minimum, less prompt payment discount; he pa ys that whether he uses the power or not, and then he pays for what he uses according to the graded rate of kilowatt-hour charge.

Q. Supposing he is paying cost up to a certain amount? A. We figure that our cost is based on 150 hour use of the load, anything above that is a little above our calculation of cost, and we figure that he is still getting it at cost in that there is not the same diversity of load that there would be for that short hour user, and he should pay a little more because he uses the current for a longer time.

Q. Do you find that you get somewhat more than cost from the users of power? A. No, we would get a little more than cost from the long hour user if we only considered that basis of 150 hours was his cost; but at the end of the year we adjust our rates, and if we are getting too much money from the power users we cut our rates, and if we are not getting enough we raise our power rates.

Q. Have any changes been made in Toronto at your suggestion? A. Oh, yes, there was a change made about ayear and a half ago. There was an increase.

COMMISSIONER J.A. ROSS: A very substantial increase? A. Yes, about 20%. I just forget what the per cent was. We divide our power into several classes. We have our ten hour user, and then we have our twenty four hour user, and we have our twenty-four hour restricted user, that is the man who keeps off during certain hours when the peak is on and he gets an extra ten per cent discount; he pays the same rate for his power but he gets the same discount as the ten hour user. Then we have the ten hour user who keeps off our peak.

THE CHAIRMAN: Q. What is the peak? A. You will see the peak hours on page six; From October 15th to 21st October, 5.30 p.m. to 6.30 p.m. November 1st to November 30th 5 p.m. to 6.30 p.m. December 1st to January 15th, 4.30 p.m. to 6.30 p.m. January 16th to February 15th 5.p.m. to 6.30 p.m. February 16th, to March 1st 5.30 p.m to 6.30 p.m. It varies with the month. During the summer the ten hour user does not get off our peak at all because it does not overlap during the summer months, the light does not come on until the ten hour user is off.

Q. Your peak is caused by the lighting? A. Generally.

Q. Somebody told us the other day that there was a noticeable increase on Tuesday afternoon when the women began using the

electric ironer? A. There is usually Tuesday morning, it comes on about eleven o'clock, and that is quite an item with the number of irons we have on all our systems. Tuesday morning in many of the towns gives the peak for the month.

Q. You do not make any provision for that here? A. No, not in Toronto.

Q. Stoves will be a very important element? A. Yes, stoves are beginning to be quite an important element in connection with the peak of the system.

Q. You may find it will make quite a difference in the peak? A. Yes, as they come on. We would simply readjust the allocation of the amount of power used by lighting, and as we put more lines in or wires to handle the stoves that increases the capital on lighting and the cost of domestic service and of course their rates will tend to go up as the cost of services comes on, if we do not get any more revenue; but they increase our revenue and it balances itself pretty well, in fact it tends to keep it down because we get a bigger diversity of load and more revenue in proportion to capital.

Q. How much more power could the Toronto Commission sell than it does sell? and still keep within the amount they are buying from you? A. They buy 60,000 power, they could sell more than they do out of that 60,000? A. Yes, they could.

Q. I am told that from year to year there is some margin and they could sell more without buying an additional amount from you? A. Toronto is fairly well balanced, their day peak is almost equal to the night peak; Toronto could not sell very much more power without buying more.

Q. If the domestic use increases they will soon have to buy more power from you? A. Yes, because their day peak would be more than equal to the night peak.

Q. Is there more or less diversity in Toronto than the average municipality? A. Toronto has a fairly good diversity, we have some municipalities that have more than Toronto. One of the best examples is St. Thomas, they are selling their power almost three times, it figures out about that.

Q. I thought Toronto sold three times? A. No, I do not think Toronto sells over double that is just an off hand statement. Toronto has not as good diversity as St. Thomas.

Q. The extent of the diversity has a direct effect on the domestic rates? A. It has an effect on all the rates, they all share in the diversity, I will show you that later.

Commercial lighting rates have been changed very little from the first rates that were suggested by the first committee I spoke of yester-

day.

Perhaps I had better explain the domestic lighting rate first. The domestic lighting rate is made up of service charge plus kilowatt-hour rate just the same as power. Service charge is based on the floor area of the house and it is based on three cents per 100 square feet of floor area.

Q. Three cents per month? A. Yes, that is figured on per month. All charges for domestic power and lights are figured on a monthly basis although bills are submitted in Toronto bi-monthly to reduce the cost of operation. The two months bill is submitted in one bill but the calculations are on the basis of a single months consumption. The domestic lighting rate is a service charge which is a charge of three cents per 100 square feet of floor area of the house and the floor area is figured on the outside dimensions of the house, less 10% for walls and partitions and then multiplied by the number of floors, so that a house that has 2,000 square feet has a 60¢ service charge less 10%.

Q. A house with two families in it pays the same as a house with only one? A. With the exception that there will be two bills if there were two services but there is a maximum floor charge of 1,000 square feet. Sometimes there might be only one bill and yet two families living in the house, there would not be any extra charge if the upstairs was rented and the lighting put in as part of the rent, there would be no extra charge but where there is two apartments, such as a duplex house there are two services and they are figured just the same as a separate house. An apartment house is figured the same as a separate house with the exception that the maximum floor area is 1,000 feet in cities and in towns it is 1,200 feet and in villages and police villages it is 1,800 square feet. It costs less to distribute in a thickly settled area than in a scattered area.

Q. That is the reason you increase the floor space?

A. Yes.

Q. What is the average floor space of a six roomed house? A. For a working man it would not be much over 1,000 or 1,100 square feet. There is an exception to that, the minimum floor area charge is for 1,000 square feet and the maximum charge is for 3,000 square feet.

Q. So that if they had 5,000 square feet? A. They would only pay for three, that is one of the changes which was made from the first originally suggested.

Q. Why was that made? A. Because the bigger house really has a bigger consumption and to charge the large house on the basis of 5,000 square feet would not be right. Perhaps I had better explain before I go farther about the kilowat hour rates. The

kilowat hour rates depend on the area and if the area is high it alters the amount that we charge as our first rate. In Toronto we charge three cents per 100 square feet as a service charge and then two cents per kilowat hour for the first three kilowat hours per 100 square feet and the man who has 2,000 square feet would pay for three times the kilowats hours at two cents and then for all over that he gets his current at one cent. So that the higher his floor area the more he has to pay on the two cent and the lower his floor area the more he can use on the one cent rate. He gets on the low rate sooner. If a man has 5,000 square feet he has to pay for 100 kilowat hours at two cents before he gets on the one cent rate so that there is a limit beyond which it would not be fair to penalize a man in a big house.

Q. Take Pellat's house on the hill, although he has far more floor space he would just pay on the 3,000? A. If we were supplying Pellat he would pay with a maximum of 3,000 feet, that is if he was using a straight domestic rate, but it so happens that particular house is fed from Toronto Power and has a separate sub-station in the house and is using as much as 50 or 100 and he has a special power rate.

Q. You will have to do something with that now? A. We will, and we will have something to do with my own service. I pay almost double what I would pay if I was getting Hydro service. I pay between $14 and $15 a month because I happen to be within 100 feet outside the City but I am paying city rates and more than double what I would pay if I was on the Hydro. I cannot get on the Hydro although I am within 200 feet of the line.

Q. The company is charging more outside the City than inside? A. No, that is just the same as the inside rate but it is more than double what the Hydro rate is and it will mean quite a drop in revenue from that company if they level the rates when they take over the company and operate it.

Q. You will have to pay for that and you will have to keep the rates up? A. I think we will be able to get sufficient revenue at the present rates. Toronto is making so much money - I won't say they do not know what to do with it - but they are making a surplus this year and it is a well paying proposition even at the present low rate.

The domestic lighting rates are made up of a service charge of two kilowat hour rates. In Toronto three cents per 100 feet floor area plus two cents per kilowat hour for the first three kilowat hours plus one cent for all the rest of the consumption and the whole thing less 10%. There is one exception to that. Last year the Commission adopted a change in domestic rates and also commercial rates in that they have the principle of a minimum bill and in every Hydro municipality in the Province the Commission has recommended a minimum bill for domestic and commercial lighting.

6-- R.T. JEFFERY

Q. Why? A. Because a small shack owner and the man with a small house they figured was not paying cost, so the minimum in Toronto is 75¢ per month.

Q. What was it before? A. There was no minimum bill except a service charge which was 30¢ less ten, which made it 26¢.

Q. The owner of the shack was not paying cost? A. No, because it is necessary to run a wire to him and put a meter in and bill him and that costs 26¢ for current.

Q. Is he paying at 75¢? A. We figure 75¢ would be sufficient to cover the cost.

Q. That would only give 50¢ for the power? A. We believe that is enough, in the smaller towns where the cost of power is higher that minimum bill varies from $1 to $1.25, $1.50 and up as high as $2.50, in small places where the power costs say 80¢. In some of this smaller towns, like Kempville in the east and Parkhill in the west near Sarnia; before the Commission would approve of going ahead with the construction of lines to serve them they insisted that the Council or the Mayor or the parties interested in these municipalities should get out and secure contracts and have them actually signed by the power users and commercial light users and domestic light users so that they could show an operating statement which would show a profit and meet all costs. At first that did not meet with a very favourable reception from some of the towns but the results have proven that we were right and the village of Parkhill, although they opposed the Commission's attitude very strenuously, came to the office and talked the matter over and they told the Commission what they thought of it in no uncertain terms but now they tell us frankly that we were right; they hurried the people up in the town to get their houses wired and the first seven months of operation in Parkhill they had quite a big surplus.

Q. When did you start that? A. About two years ago. Kempville is paying right from the start of operation and that is much better than to have these small police villages with a loss for two or three years. Now the people wire up and their neighbours urge them to wire up so that they can get the service and the people all get together and it makes a better business proposition.

Q. Is there any Hydro municipality where the minimum rate is less than 75¢? A. No, it is graded from that up as high as $2.50.

TO COMMISSIONER J.A. ROSS:

Q. Does that include the meter rental? A. There is no meter rental.

Q. That is the entire service charge? A. Yes.

Q. Keeping the meters up to the point of efficiency is included

in that charge? A. Yes.

Q. That is the only charge you make to the domestic user for the use of that meter? A. Yes, that service charge, the minimum bill encourages the users to use more current and it encourages them to use domestic appliances, to get an iron and a toaster, because it won't cost them anything for current because if a man only turns on one light ina room and then turns it off when he goes out and only uses it for a short time, his bill would not be 50¢ and he has to pay 75¢ and he might just as well use the other 25¢ worth of current.

Q. He would not be using mush light? A. You can use quite a bit of light in that way in a small house. I would not say it encourages waste of light. Our minimum is low enough so that a man can use it and not waste light. The minimum bills are not high enough to encourage the waste of light.

Q. You say the cost of a minimum bill has a tendancy to make the domestic user use more light? A. You might look at it in that way but in practice it works out that a man will go down and buy an iron or a toaster and these appliances will use sufficient to bring him up to the minimum bill.

TO COMMISSIONER R.A. ROSS:

Q. And byond it? A. Yes, we want revenue and we want these people to use power and it does not cost any more whether they use it or don't use it and we are trying to encourage them to use it.

Q. It might bring it up to over 75¢? A. Yes, he has got his iron there and he will continue to use it and increase the amount of revenue.

TO THE CHAIRMAN:

Q. There is a feeling that in parts of the Province there has been a tendancy to make the domestic rates lower proportionately than the rates for other purposes? A. I will explain that.

Q. I understand that in Toronto you wanted the City to charge a lower rate than they wanted to charge and they declined to make the rate as low as you wanted them?

A. That was some time ago. They did not think at that time that they would get sufficient revenue at that low rate that they are now using of three, two and one but the facts have proven otherwise and they are making a surplus.

Q. They are sticking to the rate they established themselves?

A. No, they are sticking to the rate we recommended. They have adopted our rate of three, two and one cent. I might say that in the matter of rates we have alwaysco-operated with the City. The Toronto Commission have not always agreed with our suggestions

BUT AFTER talking it over we have not had any differences with them at all; they have agreed because the facts show and their books show what can be done.

Q. They say they refused to reduce the rates as low as you wished them to? A. That was ten years ago, they have reduced the lighting since then.

COMMISSIONER A.A. ROSS: They say we have sold our bonds at a ridiculously low figure, we therefore have about 20% of water in the issue of that stock and we should not reduce the rates until we have liquidated that water. These arguments were made against reducing the rates at that time.

MR. JEFFREY: Commercial lighting rates are made on a different basis.

TO THE CHAIRMAN:

Q. That would include stores and office buildings, churches and hotels? A. Yes, that is set out in this little booklet. There are a few variations; where we have three and three and one and a half the commercial lighting rate would be six and three. What I mean by that is the charge for commercial lighting costs 6¢ per kilowat hour for the first 30 hours use of the light per month.

Q. Without any discounts? A. With a discount of 10% for prompt payment. For the next 70 hours it would be 3¢ per kw. hr. and for all over the first 100 hours use it is one-tenth of the first rate or 6¢ per kw. hr. The first rate is 6¢ the next one three and the next one six. The second rate after the first and the third rate is one-tenth of the first.

TO THE CHAIRMAN:

Q. I notice in the building where my office is that they are not very particular about turning out the lights. I will come into my office at night sometimes and find the lights burning there? A. That would be the hall lights.

Q. No, in my office? A. The current is pretty cheap there and it does not cost very much to leave it on.

Q. It is just wasted? A. Yes, that is wasted energy.

In fixing the rates the Commission does not try to be arbitrary with any municipality. The municipalities have associations of their own and they have two meetings a year at which representatives from all the municipalities attend and the Commission's engineers are associate members, that is my staff go there and they meet these men and they discuss points of interest in common to all these municipalities and the local commissioners come as well and the managers and superintendents and at these meetings papers are read

and they enter into the discussion. If anyone has any suggestion to make in connection with the rates or method of operations they can make them and these organizations pass resolutions and send them to the Hydro Commission, recommending the adoption of certain changes in rates and they are all given very careful consideration.

Q. You are present to discuss that with them? A. Yes; I should say I have a committee of my engineers who meet and discuss these matters I do not try to do it myself at all. We make recommendations to the Commission based on whatever recommendations are made by this Association and we report back to them and there is harmony and co-operation between the Hydro Commission's staff and the managers of all the different systems.

Q. You find it no difficult to preserve harmony?

A. No, there is good feeling among them all and they all feel that we work in their interest. We have very few kicks from any municipality. We may have some new commissioner who has not had time to really investigate the operation of his local system and does not understand perhaps something about it and we send a man out and explain it and get the matter straightened out.

Q. Is the Eugenia Association on the same plan? A. Yes, I might explain that, we called a meeting, in fact one of the municipalities in the Eugenia Association suggested that they call a meeting and form an organization. They felt that they were too far way from the Toronto office to get co-operation and a meeting was called at Durham of the representatives of the municipalities on the Eugenia system. I was present at that meeting and Mr. James the man in charge of that district and the men in charge of operation had a meeting first and they formed an organization for the Eugenia system so as to get better co-operation. They formulated a list of questions which they asked us to answer, and Mr. Lucas was there and he answered all the questions he could handle best and I answered the questions that I could handle best and Mr. Don Carlos answered the questions for the operation department and I think we cleared up practically all the differences or misunderstandings or lack of understanding which they had and I think that organization will result in closer co-operation with the Eugenia system.

Q. How long ago was that meeting? A. About four months ago. There was another meeting at Barrie on the 25th of June of the representatives of the Severn System at which I was present. Their representatives were all there and they had an opportunity of airing any grievances they had and they formed an organization similar to the one of the Eugenia System.

Q. Are these the only two districts organized? A. Yes, so far.

Q. Have not the Trent people got any organization?

A. Not that I know of.

Q. The Eugenia people have gone a little farther and proposed in favour of having an association like this in every system? A. They have recommended that and the Commission welcome it. We are only too glad to have them get together and give the Commission a chance to clear up any little differences which they may have, or any misunderstanding; otherwise it is very difficult to explain some of these things. Some town may think they have a grievance and in this way they have a chance to come and say what it is.

Q. Do you pay any portion of their expenses like you did on the Association? A. No, I did not know that the Hydro paid a portion of their expenses, I think not.

Q. Yes? A. I understood that was a separate association and paid by the municipalities.

Q. At all events you did not pay any expenses of the Eugenia Association? A. They pay their own expenses, each one pays their own expenses. We have not any funds out of which to take money to pay expenses in connection with that work. So that we have the co-operation of all the municipalities in the matter of rates. We get their suggestions so that any rates, or any change we have in these rates are the concensus of opinion of all our staff and of the municipalities in some three hundred odd municipalities.

Q. You do not satisfy them altogether, it would be very difficult to do so? A. No, we cannot do that, we could not make a special rate for each particular town.

Q. When a local municipality wants an engineer for their plant do they often communicate with you and ask you to recommend somebody to them; do you often send men out? A. We have a staff of some twenty odd engineers and I have the Province divided into three districts, there are really four and there is a man in charge of each section and he has assistants in his territory and each one of these men have so many towns that they handle and they spend from 30 to 60 or 70% of their time visiting these municipalities, going from one town to another, checking up the maximum demand on the power loads, to see that they are properly checking up the commercial loads, especially the smaller towns in connection with taking on new customers and the operation of the system in general. They help out the local superintendents who are not highly paid men

in that way these towns can afford to hire cheap men, what I mean by that is inexpensive men because they can always look to our staff for engineering work and our auditors who work under Mr. Fierdon visit each one of these municipalities periodically and inspect the books and at the end of each quarter, I suppose Mr. Fierdon showed you that they make up a statement on a form to show exactly how that municipality stands in its operation for the quarter. At the end of each three months we know how that town stands financially and whether they have operated for the three months at a profit or at a loss and at the end of the year we have a yearly statement.

Coming on to the point of how we know whether each class of service is paying cost. At the end of the year we get these s sheets. I have a sheet here for Windsor which I will show you and I have another one for Durham, I had to take the auditors copy, and here is another one for Barrie and I also have one for Hamilton. These sheets set out the earnings and expenses on the left hand page for the last year and this year and down below you will see it carried on to the point where it shows whether there was a net surplus or a net loss. Hamilton had a surplus for 1921 of $153 that is pretty close to cost. With that information before us and with the knowledge that we have of the operation of each system we prepare a subdivision of the operating cost of each system into a number of heads, that is: Lighting and power and street lighting and water works and street railway, if they have one, and determine whether or not each particular branch is paying cost and in order to do that we have these forms made up. I have had four copies made of the sheets for Hamilton as that is a representative one and I have copies of Barrie, Durham, and Windsor, then we have certain definite methods of procedure. The first thing we have to do in connection with this subdivision is to find out how much power was used by each class, that is the light and power, street lighting and water works and street railway. On this sheet we set out in the first column the total number of kilowats used, then you will notice on the sheets, a b, c, d and e, these are the different classes of power that I spoke about to you before; that is the 10 hour, 24 hour, 24 restricted, 10 hour restricted and 18 hour use. The 18 hour user can start up at midnight and run until the next afternoon but he has to stay off from half past four or six until midnight. We calculate the amount of power used by the power customers co-ordinating the amount used by each particular class. The calculation we arrive at off a peak user we substract 33⅓, class A user we charge that 10,662, that is a charge direct and you will notice 231 for class B. We take a discount of 10% and charge 208 horsepower for class B power. Class C the same 10% making the total power used by the power association in the third column opposite the subtotal of 18,126 and the actual amount charged to power is $17,095. From our charts we find out how much power was used and from our knowledge of the number of street lights we find out how much power was used for street lighting and in the same way we ascertain the amount of power used for ornamental street lighting, street lighting, street railway and for water works purposes and with

these figures we can caluulate the amount of power and the cost of power chargeable to each class of service. These dubdivisions of the cost of power are made on the basis of the amount of power chargeable to each class of service.

TO THE CHAIRMAN:

You have many more domestic users and it costs so much more to take power to them than to the others?

A. This is power only supplies to the City, I have not dealt yet with the distribution of that. The street lighting maximum demand is determined and checked fro m the actual indicated load. Water works is also taken from the load and the cost of power is charged in that way. Then we have to charge each branch with the share of opaital it has to carry and we have first sub-station equipment. The capital cost of sub-station equipment is obtained from the auditor's record. You will notice here how much capital is in substations and lines and transformers and meters and street lighting and we know how much capital is in each particular branch of the distribution system and with these figures, and knowing the amount of power used, we can subdivide and ascertain how much is chargeable to each particular service.

Substation equipment is subdivided according to the use made of that equipment, the actual cost of such part of the substation as can be charged to any particular class of service is charged to that particular class. For instance if we have a rotary equipment or a motor generating set to serve a street railway all that capital is charged to the street railway. If we have a transformer for street light all the cost of that is charged to street lighting, the balance of all the substation bduilding and equipment is charged in proportion to the horsepower or use made of that equipment by each class of service. That is followed right down and we charged to each system its share of the cost of transmission and the same with the buildings.

TO MR. WEGENAST:

Q. Is it fair to abase the proportion paid by the municipality on the power they use, have you considered that? A. We do it so I must say it is fair.

THE CHAIRMAN: Why would not it be fair?

MR. WEGENAST: Take Port Arthur and Fort William. Port Arthur has to pay the whole of it for a period of years. That is an extreme example.

MR. JEFFREY: Yes, that is a good example and is an important point and that is where one town comes in ahead of the other like Port Arthur and it has to carry all the charges.

MR. WEGENAST: In other words should not t here be a service charge to the municipality; should not there be a basic service

CHarge to the municipality?

A. Of course the municipality pays the cost.

Q. Yes, but if they do not take any it does not cost them anything? A. They do not use it them.

Q. It is there for them, and that is what you say to the private consumer? A. No.

Q. You make a minimum charge of 75¢? A. Yes, but we have not yet got the power into Fort William.

Q. Dropthat example and take any other municipality? A. Take Cayuga. We have lines within five or six miles of Cayuga, would you charge Cayuga a service charge?

A. If they make a contract with you? A. They have not made a contract and that contract with Fort William was made on the distinct understanding that they would not take power until thori present contract expired.

Q. I am thinking of a little municipality that might be taking a little power and then get off with a small proportion of the cost? A. They pay for all of any special lines which may be applied to them. For instance take Brampton; if they stop taking power they have to pay for all the lines back to their high tension substation. Q. I do not see that in the contract? A. They have to pay the cos from that substation back if they stop taking power. It does not work out that a town like Brampton would drop off, they have always come up, it keeps increasing right along . The Wadshingham System was put on its feet just last year.

COMMISSIONER R.A. ROSS:

Q. If you will notice the cost of power and separate the items which pertain to power and separate the different items such as overhead and charges for expenses and all that sort of thing you wil find that if you put a service charge to cover these things you would be putting on about 80% of your charges in a flat rate and you would have 20% for power and how could you go to a man and say, "You have to pay so much whether you use power or not"

"We have to pay as much whether you use power or not."

COMMISSIONER R.A. ROSS:

6. If you will notice the word of power and separate the issue

he would not take it; you have to feed it to him in that way.

MR. WEGENAST:

We are four-fifths on a flat rate.

COMMISSIONER R. A. ROSS:

Yes, you charge 80% of it on the flat rate but you have got to get at the human element.

TO THE CHAIRMAN:

Q. You think the present way of proportioning it as to the amount they take is about as fair as any way that can be devised ? A.Yes, if you leave Hydro out of it you have to compete with Companies and a company knows perfectly well that they ought to charge a man $20. a year for the lighting for his house of which $15. a year would be for fixed charges but you could not go to him with that and get him as a customer.

MR. FRANCIS: Take Westmount as an illustration, that is not Hydro that is a municipal plant.

MR. WEGENAST: You don't make concessions to the other fellow.

MR. JEFFERY: You try to recover what you dare from the fellow who does not use it .

CHAIRMAN: If you took the other course you would make it more than 75%.

COMMISSIONER R. A. ROSS: Yes.

MR. JEFFERY: I think 75% is quite sufficient.

COMMISSIONER R. A. ROSS: It covers the most flagrant cases.

MR. JEFFERY: Yes, in either case where the cost of power is high you might almost apply the words Mr. Ross has used where they pay $3. and $2.50 as a minimum bill.

MR. WEGENAST: Your ideas in that respect have been progressive.

MR. JEFFERY: Our ideas and our basis of rates have grown and as we saw the necessity of changing we have made changes.

COMMISSIONER R. A. ROSS: You could not have a flat rate in Toronto because you had to compete with another system.

MR. JEFFERY: I have shown you how we arrive at our cost of power in each class. I am now dealing with the capital, look at the second page of the report and you will see how capital is split

up in lands, buildings transformer system substation equipment and distribution system, poles, meters, etc., and all down the line. I tis split up into the lighting, power, water works, street railway, if they have a street railway, street lighting and ornamental street lighting. The capital th t is used for the whole system is subdivided or allocated to each particular class according to the use they make of it. We have a definite system that we follow in making these subdivisions of our operating cost. We have men who write charts, who know the characteristics of the load in each town they take up, what the load should be and if they do not know they go to the place, Hamilton or London, and they collaborate with the manager there and get him to help him in arriving at these figures. We get the assistance of the local managers in arriving at these figures and this year we had made up the operating cost for every municipality on the system and Sir Adam, Mr. Gaby and myself and the auditor sat down with all these sheets in front of us and spent almost days on each and every town and we made our recommendations. We first lined them all up in the form of a tabulation.

Q. Before you recommend any charges you confer with the town? A. With the larger towns, but with the smaller towns where they have not got men who are capable of investigating these things and give us any information to help us, we of course don't bother with them because they could not help us in any way but if they want any information we will give it to them and give them copies of these figures and have our man sit down with them and go into all these details and explain everything to them. The Owen Sound men are in my office this morning and Mr. James is showing them how we arrive at the subdivision of the Owen Sound operating cost.

Q. The first they knew of it was when they received notice from you? A. They all knew it was coming just about a certain time. We get them out as soon as we can. We are held up somewhat in waiting for the auditor's reports and we have to have these sheets before we can actually make up our operating statement and that is the time to make up the 1921 cost. They should be made up to the end of the year but it takes five or six months before we can get all our figures ready to decide on our recommendations for rates. With all these figures and with the men on the job we calculate about what changes, if any, should be made in the rates to each branch of the service in each town and they are submitted to the Commission and Mr. Gaby and the Chairman - the other Commissioner, Mr. Miller has been sick and Mr. Carmichael has been busy - but Sir Adam went into the rates in every town on the system to see what changes should be made in the rates.

TO MR. WEGENAST:

Q. What is the largest of the towns that gives good intelligent assistance in arriving at the rates?

A. We get it from Toronto right down to Brantford.

Q. What is the smallest town? A. Brantford and St. Thomas and Kitchener and Waterloo, places about that size. The smaller places like Luzan and Brampton where they have not got a man who really understands enough about these things we do not get any help from them.

Q. What about St. Marys? A. We might get some assistance from the man at St. Marys and we would get some assistance from Brampton in getting at the amount of the load used by each Brampton service but in figuring out our allocation they would not be of much assistance to us.

Q. Does not every town allocate its load? A. In some of them we just take their chart and talk with the Superintendent and ask him to help us out.

Q. Has there a considerable increase made this year?

A. Yes, more than the average in the normal system.

Q. In the Province as a whole? A. In the province as a whole when you include Niagara, there was an increase made in the Niagara system of $4 per horsepower in all municipalities to take care of the increased cost of power on account of the Chippawa coming on, that does not mean that the unit rate in all municipalities in the Niagara System was increased $4 because some of these towns were paying too much for power during last year; that is the estimated rates were higher than cost and at the end of last year they got a credit instead of a debit.

Q. If your estimates are verified by experience what will be the gross increase of Hydro over last year, assuming the consumption will be the same? A. We have not co-ordinated that but there will be a substantial increase because for instance there was no increase made at Chippawa. In Clinton there is an increase of $2 instead of $4 because Clinton was about half more than cost. We have the figures from Mr. Pierdon showing the standing of the municipalities on our books and if any town is not paying enough for power the 18th bill is written up in their books. Each municipality shows exactly how it stands with our Commission with regards to its cost of power.

TO THE CHAIRMAN:

Q. I noticed a headline in one of papers the other day stating the Hydro had been reducing the rates, that in 66 municipalities you had reduced them and in 40 municipalities they were increased, to the average reader the impression conveyed by that would be that the Hydro was getting less this year than last year; that would be altogether misleading? A. This year there was no change made in domestic lighting. In towns where they paid as high as eight cents per kilowatt hour for first rate and 4¢ for the next rate we cannot get them to use ranges or domestic appliances to any considerable extent because the

rate is too high and in all of these town where they adopted the minimum bill, where the rate is 8¢ and 3¢ and 6¢ and 4¢ there is a minimum bill of probably $2 per month and the Commission have recommended to these municipalities that the maximum follow on rate should be 2¢ and not 4¢. In Toronto where they are 3,2 and 1 it is not affected and in Windsor where they have 3, 1½ it is not affected but in a lot of smaller towns like Arthur, Beeton and Cannington, where the rates are up about 3,6 and 3 it is affected. Four to two cents is the rate at which domestic appliances and ranges can be used and we want to encourage the use of ranges and domestic appliances thereby increasing the loads taken by these smaller municipalities that are situated a long distance from the source of supply.

Q. In Wallaceburg you reduced the domestic rates, would that be for the reason you have just given, in order to increase the revenue? A. It was to increase the revenue from this town. In Beaverton we cut the rate from 3,5,2½ to 3, 4½ and 2½. That is the domestic rate and the commercial rate was cut from 10,5 and 1 to 9, 4½ and 9. That was because Beaverton had a big surplus on our books and on their own books, I think it was about $3,000. The Cannington rate was cut from 3,6,3 for domestic to 3,5, and 2 and the commercial rate was cut from 12, 6, 1.2 to 10. The rates in the smaller towns, the follow on rate for light, has been cut to the maximum of 2¢ per kilowatt hour and we expect the use of the current to be increased and our revenue to be increased and our load to be increased in these towns and the cost of service to go down.

There is one other phase of the situation in regard to the matter of rates, I have covered domestic and commercial and power and then there is the rural. Do you want me to explain the rural?

TO THE CHAIRMAN:

Q. You have not gone as far with the domestic rate as I would like you to, you said you was going to deal with the additional cost of distribution and bookkeeping. There is a wide-spread feeling that you are selling to local consumers at less than cost? A. The cost of transformers on the poles are subdivided according to the capacity or the load supplied for lighting and for power, the copper wire is split in proportion to the number of miles or length of copper used for each class of service and we keep copies of our distribution system and we scale off the wire used for each particular class of service because we know how much mileage should be charged to each particular class of service. I am no speaking of substation operation and maintenance, that is charged to each particular class. If we have a substation operator whose duty it is to operate a rotary converter to supply a railway all of his services will be charged to the railway. If we have part of the service charged to water works he gives part of his time to the operation of water works, that part of his time would be charged to water works, then the balance of the operating cost is charged in proposition to the amount of power that is supplied from that substation.

TO THE CHAIRMAN:

Q. That is if there was 50 domestic users using the same amount as one power user you would charge the same amount to each? A. We would charge the same amount to each? A. We would charge the same amount of the operation of that station to each.

Q. Is that fair? A. We believe so because it is in proportion to the use made of the equipment and the station. We put 100 horsepower in that station; supposing we had 10,000 horsepower in that station and 5,000 of that went to domestic lighting and commercial lighting and 5,000 went to power, we would split that 50-50.

TO MR. J.A. ROSS:

Q. That only applies to the substation? A. Meters are charged direct to the service for which they are installed. If we have 10,000 meters on lighting and we only have 100 on power the cost of the 10,000 is charged to lighting and only 100 to power.

Q. How many people would you serve through one transformer? A. That depends on the size of the transformer and how the people are located with respect to the transformer. In some places they do not put in anything smaller than a five kilowat transformer and in other cases they do not use anything less than 10 or 15 kilowat light transformers and those that are used for lighting are all charged to lighting and the transformers used for power are all charged to power.

Q. Are the transformers that are used for lighting used for any other purpose? A. In most cases no. Power is supplied at 550 volts and lighting at 110 and where a transformer is used for both we split the cost in proportion to the loads supplied from the transformer in power and lighting. Maintenance we split in the same way as meter maintenance is charged, direct to the class of service for which the work is done, and if we spend money on maintenance we charge it to that service. The distribution system, operation and maintenance, that is poles and wires and cross-arms, is charged in proportion to the mileage of wire used to supply each class of service and not as to quantity. Street lighting maintenance and operation is charged to street lighting and the rental of the meters and cost of putting in new meters is charged to street lighting.

Billing and collecting is subdivided on the basis of the number of consumers and the number of bills. We figure that one power bills is equivalent to five lighting bills as regards the matter of billing. It takes more time to bill a power customer and collect his bill than it does a lighting customer.

Q. Why? A. Because you have to be more careful in figuring it and it has to be checked a little closer and it takes a little longer time to collect. It is calculated on a different basis.

Q. I find that if I am sending out a bill for interest on a mortgage it costs me no more to get a bill out for a $50,000 mortgage than for a $500 mortgage? A. That is quite possible because the interest is all made out on the same basis but these calculations are different. Our calculations for power are different to our calculations for lighting and we have to be very careful and we give more time to it.

COMMISSIONER ROSS: Q. A man will go into a house where there is electric lighting and go into the kitchen and look at the meter and go out again but if he goes into a place where they are using power he has got to take charts and look all over them and the work is more expensive.

TO THE CHAIRMAN:

Q. What about rendering the bill after the man has reported? A. That is part of the bill. Reading the meter and billing and collecting is considered as one item.

COMMISSIONER R.A. ROSS: If by chance the man who reads the house meter makes a mistake it goes on the next month but in the case of a power bill it would be lost and they have to be much more careful.

THE CHAIRMAN: They have to take agreat deal more care.

COMMISSIONER ROSS: Yes, but I do not know about the five to one, there seems to be a vast difference there.

THE CHAIRMAN: Could you suggest where the domestic user is paying less than his than his proper proportion?

COMMISSIONER R.A. ROSS: I have some questions to ask Mr. Jeffery when he is through.

MR. JEFFERY: Debenture charges and interest charges are charged pro rata as to the value of the plant used for each class of service.

Q. You sell to the user of domestic power appliances of various kinds? A. Yes.

Q. You have to keep all these accounts and they are included in the same bill? A. That is a separate thing entirely and any business that a municipality goes into, for instance, if they establish a store and sell appliances that store must stand on its own feet and they must sell the appliances on a basis that will cover all costs.

Q. They have to sell at trade prices? A. Yes, but there is a profit and any profit they make on them is put into the general pot, it is put in as revenue.

Q. Toronto made $4,000 profit last year? A. That went in to reduce the cost of power to all classes on the system.

the bill after the man has returned. A. Sending the motor and filling and collecting the bill.

the bread motor makes a mistake it goes on the next month but it

THE CHAIRMAN: They have to take expense deal more once.

COMMISSIONER ROGS: Yes, but I do not know about the five

COMMISSIONER R.A. ROGS: I have some questions to ask Mr. Jeffery when he is through.

MR. JEFFERY: [illegible]

Q. You roll to the rear of domestic power appliances of various kinds? A. Yes.

Q. You have to keep all these companies and they are included in the same bill? A. That is a separate thing entirely and may be [illegible] that a municipality goes into, for instance, if they establish [illegible]

it is put in as revenue.

Q. [illegible] 46,000 people last year? A. That went in to income [illegible] to all classes on the system.

Q. It might have gone to meet losses? A. If there were losses.

Office and general expenses are charged on the basis of th total of the other expenses. We total all the other expenses up and the office expenses are allocated among classes in proportion to all the other expenses.

Q. In proportion to the amount? A. Yes.

Q. Is that right? A. We think it is. There are one or two items which are arbitrary. I might say quite a lot of this is arbitrary but it is based on what we think good sound common sense. If we are wrong we are always open to suggestions to change. This has been changed once or twice in several respects from the time we first started, where we thought it was perhaps not right we changed the basis.

Q. Is not it part of your policy that it is in the public interest that the small user should have its light and power for domestic purposes at a pretty low rate, just the same as when a country is making up a tariff it makes it low on domestic articles? A. No, in suggesting our rate and setting out the basis of these calculations we have not considered that at all, we have tried to make it hard and fast.

Q. Would it not be possible for someone with a different policy to make different rates by using the same system?

A. Not by this same system, He would have to arbitrarily decided on a different basis of allocating these charges. We have tried to stick to the hard and fast rule of cost and all these rules are set out on that hard and fast basis.

Q. If you set two experts at work they would arrive at different conclusions? A. Not if they were experts.

Q. How could you get at a rate of 3,2 and 1 in so many municipalities all at the same time? A. That is the rate just established for the municipality to cover cost. I will show you in a minute the revenue we get on that basis of 3,2 and 1. If we do not get enough we know that 3,2, and 1 is not high enough, if it is too high we have to put in a different rate.

Q. There are municipalities in which the cost of distribution must be much greater than in Toronto where you have 3,2, and 1? A. There are very few municipalities that have a higher cost of distribution than the City of Toronto. Toronto is one of the most expensive systems per horsepower or customer that we have in the Province.

Q. How is that? A. They have competition for one thing and they run on streets where they have customers here and there and they run on streets where they have to over-build a lot of lines or go on the opposite side of the street and over-build power lines and they have

to make more expensive construction and they have under-ground conduits and they have concrete poles which makes a very permanent distribution system with a very low maintenance and renewal charge but quite a high cost for the first installation. Toronto has an expensive system and necessarily so on account of the conditions under which the system has to be constructed and operated, but we have a big variation in cost of distribution per customer or per horsepower depending on these conditions. As I said yesterday the cost of constructing the distribution systems is decided by many factors. One is the area that has to be covered in proportion to the number of consumers, the next is the character of the soil. If you have to blast a hole through rock for every pole you put in you are going to have a very expensive distribution system. You might have to construct a distribution system where there are a lot of shade trees and where the owners object to having them very closely trimmed or cut and you would have to erect 45 foot poles on many streets, whereas if there were no shade trees you could erect 30 foot poles. You would double the cost of the line on that particular street by the erection of the 45 feet poles, on many streets, whereas if there were no shade trees you could erect 30 foot poles. You would double the cost of the line on that particular street by the erection of the 45 feet poles. These are all these items which might enter into the cost of a distribution system.

Q. What proportion of the cost of power to the consumer is distribution? A. That will vary from place to place.

Q. Would it be 30 or 40%? A. It will run maybe 25% but the average cost of power will run one-quarter of the cost of the total power. I won't say that is hard and fast. You will see in Hamilton they paid almost 5%.

Q. How much power does Toronto purchase? A. Between 60,000 and 65,000 horsepower.

Q. You have increased their rates rather more than $4?

A. Yes, Toronto was increased but not quite $4. It was increased $5 from 17 to 22. The actual cost of power to Toronto last year was something over $17.

Q. Over $18? A. I am not sure what it was.

Q. You increased it $5 this year and that will make it $350,000 that Toronto will have to pay you this year? A. Yes.

Q. At the time you made these increases in price did you just increase the rates so that they would produce revenue sufficient to meet that $350,000? A. No, Toronto will have sufficient surplus to take care of that increase in cost without any additional increase of cost to the consumer. It is not necessary to increase the rate to the consumer to get sufficient to meet that additional $4 or $5.

Q. It will take all their surplus? A. That is a point as to whether

it will. The domestic lighting business in nearly every municipality that we supply is increasing each year anywhere from 20% to 30%.

Q. They will have to buy more power?

A. They will have to buy more power but that would mean that the cost per horsepower would drop again.

Q. Is not it desirable that they should have a surplus on hand?
A. No, it not necessary for them to have any surplus to take care of any operating cost, I mean any capital cost out of surplus.

Q. According to the Act with the approval of the Commission the surplus may be used in extensions of plant and you will find that practically all of the municipalities have used their surplus in extending their plant to such an extent that their actualcapital or actual assets are a great deal more than the debentures they have issued to meet them; they have been using the surplus for that purpose?

A. Yes, and we have in 10 year operation got several towns that are almost with their entire system paid for.

The City of Barrie has enough surplus on hand and cash in the bank and Victory Bonds in which they have invested their surplus, to pay up their entire debt. Waterdown is in good shape. Waterford issued short term debentures, I think 10 years, and they will, I think, write off all their plant next year. There is about $1200 that they still have to pay and that will be another town that will have no plant to pay for. All they will have to pay for is operation of their system and the cost of power.

Q. Would Toronto be put to a large extra expense in order to take over the Toronto Electric Light?

A. There will be considerable expense in co-ordinating these systems, and it is quite a problem to know just how Toronto will come out, but with the co-ordination of the systems and the cutting down of the operating cost as regards office expenses and operating expenses, it will materially reduce the cost per customer to both companies, that is both the Hydro and the company which they are taking over, and then there will be additional revenue which they will get from their customers of their system, and practically no additional distribution system. The distribution system is in, but there will have to be some co-ordination of these two systems at the sub-station. Eventually they will take out the company's lines on certain streets and scrap them or use them elsewhere.

Q. They will have to pay for the property which they scrap?

A. Yes, whether or not they will be paying enough or too much

for that property which will necessity an increase in rates is another thing. I do not think they are. I think Toronto will be able to take over that system and charge only the present Hydro rates to the old customers, and make both systems pay.

MR. MACDONALD: To what extent will Hydro control the rates charged in the new system?

A. We would, as I said, co-operate with the Toronto Commission through their manager and their Commission and suggest changes in rates.

Q. You will have the same control over them as you have over other municipalities? A. The same control.

Q. Will you try to control the city in the working out of the 60 cycle system and co-ordinate with the other?

A. As regards the matter of rates, it makes no difference whether it is a small town or a big city, we co-operate with them and make our recommendations just the same.

Q. May there be some inconsistency as between your Commission and the Toronto system dealing with this 60 cycle system; you may be more or less anxious to have the 60 cycle system abandoned?

A. No, I do not think there would be any difference of opinion on that matter. They have made a very careful study of it and perhaps they know more about the co-ordination of that system than we do. I hope they do. We will take their recommendations as to the actual details.

TO COMMISSIONER R.A. ROSS:

Q. You are interested in rates; you are not interested in their internal engineering?

A. Not to the same extent, although we are keeping a check on them and when they want any money they come to us and ask the Commission for their approval for the issue of additional debentures. Toronto asked for an additional two and a half million dollars for their system very recently. In making application for that sanction, they set out the details of expenditure for which that money was required. With that information, we went to the manager and conferred with their engineers Mr Hart, and had him explain what they wanted this for. We went out to the different stations and saw what capacity they had in these stations, and where they proposed to extend, and in connection with the new office building they have purchased. All these matters were taken up, and our engineers went into the matter with them, not in as much detail as they would, but to see that the expense is warranted so that no municipality can run wild and ask for debentures for a large amount and overload their system with capital which we do not think is necessary.

Q. You do that in every system? A. Yes.

Q. Do you give them fairly prompt consideration in each case? I understand in Toronto that their work has been held up for sometime because they have not obtained the approval from the Hydro, and they have been embarrassed owing to that?

A. The approval of the Commission is given just as promptly as we can get approval to them. It takes a little time. The fault does not always lie with our Commission. They do not ask for the approval soon enough, and do not give us sufficient time. They sometimes neglect to ask for the approval until just the time they want to go on with the work. They come to the City Council to get approval of the debenture issue and then they come back and see if the Hydro approved it, and then they ask us, and then it takes time for us to investigate.

Q. Has approval been given for the purchase of this new building and equipment?

A. Yes, that is through sometime ago. There was some little delay, but it was not all due to our side.

TO COMMISSIONER H.A. MOSS: I have the Hamilton sheet for 1921 before me, and looking down the line of maintenance and operation and the allocation of these on the basis of which you have indicated, they look reasonable, but the question that I have always had in my mind is the allocation of these on the basis of which you have indicated, they look reasonable, but the question that I have always had in my mind is the allocation of the gross surplus. The salaries and expenses are $12,000 odd, and the point I have had in mind is as to whether you were charging enough in connection with your lighting customers as compared to your power customers. You have a great many lighting customers, and comparatively few power customers, and yet your expenses are on the same basis comparatively?

A. You will notice in the next column there is a sub-total, and that sub-total is the total of all the items above that, and these items below are in proportion to the sub-total.

Q. The salaries and expenses, is that a fair proportion? A. We think it is; you understand these are only general office salaries.

Q. Supposing I went to the Toronto office, and figuring the number of bills that were paid and the number of customers and the amount of bookkeeping and running around to satisfy the lighting customers, I think I would be more likely to put that up; I would be likely to make it $5,000 for the power and $17,000 for the lighting?

A. There is part of the operating in there and collecting. That is up farther. This is only the overhead.

Q. Then I will take it back? A. This is only the managers' salaries, General Superintendent, Assistant Manager and city office salaries and expenses that cannot be charged to anyone particular class.

Q. Supposing you throw the whole thing over, it would add about 20% to your lighting cost, and reduce your power cost accorrespondingly, but it is not a very large item?

A. You will note there that we carry right out to the gross surplus for each particular class, and then we have our depreciation. We have a method that we think is right. We know for the year whether any municipality has a surplus or a deficit on lighting or power on the basis of these figures and on the basis of the information we receive from them, and the rates are adjusted for the year. If we are not getting enough money for light from Hamilton, we charge more. The street lighting in Hamilton was $30 for a 500 watt lamp, and it was increased to $37 and other increases were made in the same way. The increases of the town are made retroactive to the first of the calendar year, and the increase to the consumer starts with the first billing after the increase is sent out.

MR. WEGENAST: Are there any exceptions to that rule?

A. No.

Q. Then they pay that out of what? A. Revenue.

Q. They have got their revenue in? A. That is one case where the municipalities have objected, and there seems to be some ground for their objection, but I do not know just how we are to get over that. We cannot make a re-adjustment until we get our auditor's report in, and by that time six months of the year have gone, and the town cannot collect from their customers, and the re-adjustment is somewhat inconsistent. We figure they will collect them in about six months, and we figure on the rates being a little higher to take care of that big difference, and for the year they will come out about right.

Q. There is a certain robbing of Peter to pay Paul?

A. There may be there.

Q. You may right it the next year? A. It will take care of itself the next year.

Q. Have you considered whether you might not have prices fixed so as to reduce the waste of power, like that immense amount that is used here at night for illuminating purposes on some of the streets and store windows? A. Of course at that time our power costs us nothing.

Q. You might not have to build your Chippawa canal?

A. We were building our Chippawa canal to take care of day power and peak power. We were not building it to take care of the power when we have most of it. If it was not used for that purpose it

Q. Are there any exceptions to that rule?

A. No.

Q. Then they pay what one or where?

A. They have not under reasons for.

Q. There is a certain robbing of voters to pay taxes?

A. Yes.

Q. Are you right in the same year? A. It will come out of the same year.

would not be used at all.

Q. Is it the requirements in daytime that govern your policy? A. Yes.

TO COMMISSIONER J.A. ROSS:

Q. I am not quite clear on that 7½ service charge, how do you arrive at that, is it arbitrary? A. That is not altogether an arbitrary figure but it is partly. We calculate what the average cost of current to the consumer was, in the average town it comes to pretty nearly 75¢.

Q. Does that include operating and everything?

A. Yes, and collecting.

Q. What is the cost of the meter in the average house are they all the same? A. Practically all the same, they would vary according to the size.

Q. For domestic lighting? A. From $7 to $11, you might say $9.

Q. Is the life of it quite long? A. Probably 15 years, they have to be checked every five years.

Q. You have your men going around to make the reading each month, what proportion of the 75¢ is for that?

A. I would not like to say.

Q. How much does it cost per house to have the meters read? A. That varies in the different towns.

Take Hamilton it has about 22,000 customers and the cost of billing and collecting is about $25,000, so that is a little better than $1, that would be about 8½¢ each month. The cost of rendering bills and reading in Toronto is 13¢. The Hamilton cost of billing and collecting is about the lowest we have in the Province. Toronto is almost double their cost.

TO MR. SEGSWORTH:

Q. What are the items? A. The reading of the meter, the calculation of the bill, the submission of the bill and the collecting, where a man does not pay there is a little more trouble. The meter rental or fixed charges on his meter and the fixed charges on the particular part of the system.

Q. How much would that be of the 7½? A. It is hard to split that upoff hand.

Q. You can do it better than we can? A. I would not like to make a guess at that.

Q. Would it amount to 50% of the 75%? A. No, it might be perhaps 30 or 40%.

Q. Can you analyse one of these for us? A. Yes, I could have that done.

TO COMMISSIONER J.A. ROSS:

Q. In the case of a manufacturer he is in a certain class, say 10 hours a day and for five minutes in one day he goes over.
A. Ten minutes.

Q. He goes over his classification? A. Yes.

Q. Then you put him automatically into class B?

A. No, you mean if he runs over his hours, does not cut off at six o'clock?

Q. One offence? A. No, I do not think they do that for Class D. You take a restricted consumer, he is a man who is supposed to cut off during certain restricted hours; if in looking over that chart we find that man is running over the hours and is on when he should be off, for that particular month he will be on Class A, we give him a chance but if he persists he is automatically put over on a higher class and does not get his discount.

Q. He has to commit more than one offence? A. As a rule we usually put that up to the local men to use their own good judgment; we do not try to do everything for them, we try to let them use a little horse sense in cases like that.

Q. I was under the impression that a man in class C or E if they committed one offence would be automatically put into a higher class? A. According to the strict wording of the rule he would be but what happens is he goes to the Manager and says he does not intend to do it again and some of his staff may be connected up unintentionally and we will say we will charge you a high rate for that month but don't do it again but if he runs over when they check them over he is put automatically on a higher class. You have got to have a penalty or they will continually run over. When a man finds he is penalized he is more careful.

TO THE CHAIRMAN:

Q. Supposing he claims it was by some mistake that he went over, would you make him pay for that month?

A. Yes, and he would be told that if he went on again he would have to pay the penalty for the balance of the year.

TO COMMISSIONER J.A. ROSS:

Q. The E.L. Ruddy Company use a number of lighted signs, what class are they in? A. I believe they would be under a commercial lighting contract where they use power.

Q. There would be no concession to them? A. No, they are on the general commercial rate, of course in running right through the night they get it on a low rate, that is onetenth of the first rate.

There is just one other thing that I might explain if you want me to and that is the matter of rates for rural customers.

THE CHAIRMAN: We will take that up tomorrow morning at 10.45.

Q. Mr. Ross has been telling us that this is an exact science? A. It is not an exact science, you have to use horse sense but we have tried to follow exact science as far as we can.

Adjourned at 1 P.M. until 10.45 A.M. Tomorrow.

-- oo --

R E B U T T A L

J.A. ROSS, ESQ.,

You have no standard rates governing the rural service.

A. None of that nature. The rural has been changed so often by legislation and methods of operation that we have not got down to a standard basis. Before going on with the rural, you asked me to work out one or two examples in connection with the minimum bill of 75¢. I have had the man who does this work, work out a few examples and I will explain how we arrive at the figures in each sub-division of operating costs. We have figures of the total cost of service to each class of user, setting out domestic power, street lighting and railway and water works, if they have any. We know the number of domestic consumers we have and we know the total operating cost including power. If we take the cost of power away from the total, we have all the other charges left, which would give us, by dividing by the number of consumers, the actual service cost. So I have figured out a number of towns in that way. I have Clinton - 68¢ per consumer, per month, outside of power. This is the actual cost, on the basis of last year's operations, without power.

MR. R.L. ROSS: Q. Just the same as if you took the cost of the milkman's services, without the delivery of the milk?

MR. J.A. ROSS: Q. 68¢ for towns as against 26¢ for cities?

A. The 26¢ was a service charge, made to cover the cost of service.

MR. FRANCIS: Q. I am not clear as to the charge. Mr. Jeffry spoke of 68¢ at Clinton is that what is comprehended in the 75¢ bill.

MR. R.L. ROSS: A. No, It does not cover the power.

MR. JEFFERY: A. It would not include the milk. I am trying to show that the actual cost is 75¢ without any power. To show you that 75¢ is not too high. It really should be a little higher. In some towns it is more than 75¢ without any power at all.

THE CHAIRMAN: What does Clinton charge?

A. 75¢ is the minimum bill.

Mr. Ross has asked if that is the figure that would compare with the 26¢ service charge to the small house. Now the service charge

on the basis of which the rates are based while theoretically it is supposed to cover all of the cost of service if the consumer does not take power, is not high enough and never was. That is why you have a service charge plus a k.w. hour rate. It is made that way as a matter of expediency in making rates. As Mr. Ross said the other day, it covers as much as dare collect. The 75¢ minimum bill is as close, with the knowledge we now have, as we can get to the actual cost of service.

THE CHAIRMAN: Q. 68¢ without the power. The power just costs 7¢ ?

A. They would pay for whatever power they actually used.

MR. R.A. ROSS: The milkman delivers you one quart or one gallon and the cost of service is the same but you pay for the milk in addition.

THE CHAIRMAN: Q. The 75¢ includes the milk as well.

A. In some cases it does but in Clinton the cost of delivering the milk is 68¢ but the actual charge is 75¢, including the milk - though perhaps not very much.

THE CHAIRMAN: Q. It includes all the milk that is used in a family per month in some cases.

A. Yes, in a very small house.

Cost	Town	Minimum
.11	Dundas	75
.68	Clinton	75
1.33	Wanville	75
.53	Elmira	75
.74	Elora	75
.68	Goderich	75
.73	Guelph	75
.60	Hamilton	75

You asked me if I could make up the details of that made up these items. These details are made up from the sub-division of the operating cost from the same figures as the other part.

In Dundas -

Substation maintenance	5¢
Distribution maintenance	9.6
Line transformer maintenance	9
Meter devices maintenance	2.25
Billing and collecting	14
(This is lower than Toronto)	
Fixed charges (Sinking funds, etc.	14.9

THE CHAIRMAN: I would like to know how you arrive at that capital.

5-- R.T. JEFFERY

A. The capital cost of the sub-station, for instance, is split up in proportion to the amount of power used by each particular class.

THE CHAIRMAN: Q. That seems to me open to question.

A. That part of it. Then you come to the transformer system. That is split in proportion to the amount of wire, etc., each wire uses one pin space on the pole and takes as much space on the pole as any other wire. This is split in proportion to the miles of wire on the service. Meters are charged direct to the class on which the meters are connected and the same way with other parts of the equipment used specifically for that class.

THE CHAIRMAN: Q. For domestic users, the cost would be higher than for power users.

A. Yes. You must have one meter for every customer, although for the power user you must have a graphic meter which costs more, he uses more power. Line transformers are apportioned to the service where they are used and, where they are used in common, they are split in accordance with the amount of power taken from that particular transformer. For that, you must have a knowledge of the System - which our men have. In a small town, where you have ten transformers supplying service you have one bank of transformers we know how much power is supplied and we know how many customers.

THE CHAIRMAN: One power user might use three-quarters of the power.

A. Yes. Now going back to the sub-division of the operating cost -

Fixed charges .l.....	16.9
General salaries and expenses ..	9.3
(Supt. Mgr. General expenses would not be charged specifically to each particular class. That is under the heading of billing and collecting; that would not come in because the clerk who did t the billing would be charged to Billing.) (?)	

Managers are split in proportion to all the other expenses on the system. If you will notice on the sheet all the other expenses are added up first and, on the basis of that total, the expense for that particular class, overhead and general office expenses, are divided. That is an arbitrary method, but it is the best method we know of.

MR. HANEY: Q. That is not a power basis. It is a financial basis.

A. Yes.

THE CHAIRMAN: Is this system adopted throughout the country?

A. No. This is our own system. I know of no other organization that has such a system.

THE CHAIRMAN: If they are arriving at the cost of domestic power they may have a different way.

A. Yes, but other organizations do not have to supply at cost.

THE CHAIRMAN: But most of them know what cost is.

A. Most of them know pretty closely but I doubt if they know as accurately.

---------- expenses	9.2
Depreciation, renewals	18.3

THE CHAIRMAN: That is made up in proportion to cost.

A. That is made up on the basis of capital that is expended for each particular class.

THE CHAIRMAN: That is on a financial rather than on a power basis.

A. Yes. Straight financial.

Hamilton -

Sub Station operation	2.5
Sub Station maintenance distribution	3.
Line transformers maintenance	.9
Meter devices maintenance	4.7
Promotionexpense	1.7
Expense in connection with salaries, billing and collecting.	10.6

(Our auditors check these figures to see that proper charges are put in.)

Fixed charges	16.4
General Salaries	4.5
Promotion of business (advertising)	2.

..... 1.7
Depreciation 11.2

I might explain that, up until very recently, Hamilton has been operating certain contracts beyond its limits. Barton Township issued debentures to pay for the plant and Hamilton supplied the power on a cost basis. Barton Township recently asked to have their system separated from Hamilton so that they could operate on a power basis.

THE CHAIRMAN: In cases where cost exceeds the minimum charge, who pays the difference?

A. It is the average over the amount that is charged to the other customers of the same class. At the endof the year the Commission know whether, as a whole, we get sufficient revenue from each class of service. If we have not enough money we must increase the rates. If we did not put the 75, on to the small consumer, the rates would have to go up to all customers to meet the cost.

The matter of rural power is one that has caused us engineers considerable worry. The determining of rates for power and the cost of service to rural customers is, I think, without doubt, the most difficult problem that we have had to deal with for sometime, because we have had no data to work on. No Company has ever supplied power to rural customers to any extent, from which we could get any data to determine rates. You must have some knowledge of the uses a customer would make of the service. Our former training on the farm helped quite a lot of us to understand what uses a farmer would have for light and power. Up to about three years ago the Commission were supplying power to a number of farmers in various parts of the province, under an amendment to the Power Commission Act passed in 1911. According to that amendment if any farmer, or group of farmers, wished to obtain power, they would first sign a petition. That petition would be sent to their Township. The Township would forward the petition to the Commission, requesting an estimate of the cost of supplying the required service. The estimate is prepared and forwarded to the Township Council and, within one month after the receipt of the estimate, they call a meeting to which the various petitioners are invited and can come to the meeting and say whether or not they wish to sign contracts to take power at the rates quoted in the estimate.

THE CHAIRMAN: Who would make these rates? Your local engineer in charge of the district?

A. The man in the district would go out and make a map showing where the line would run and what are the difficulties as to overhead lines -- large trees or rocky soil. He would get sufficient data as to the location of the consumers, thus enabling us to give a fairly accurate estimate.

THE CHAIRMAN: Q. You would make that estimate here? You have

not a staff of men who go around, throughout the Province, and report?

A. We would make it here. It is part of the Municipal Engineer's work to look after the towns and district, thus cutting down the railroad fare, etc.,

THE CHAIRMAN: Were you represented at that meeting?

A. They notify us and we have a representative to advise the farmers as to how much power it takes for their different purposes; also details as regards the contracts into which they would have to enter (which would be a 20 year contract) and also to the Township Council particulars as to what kind of contract the Township would have to make with the H.E.P.C. If the consumers decided they wanted the power, the Township would make the contract with the H.E.P.C.

THE CHAIRMAN: If two-thirds wanted it and one-third did not, you could not make the one-third take it?

A. No. It is at their option but we make our rate based on so many consumers taking power on that line. If half drop out that would kill the whole proposition at that rate and we make a new rate. On that basis the Commission, up to 1920, were supplying power to nearly 2000 farms.

THE CHAIRMAN: Could the Township issue debentures?

A. The Township would issue debentures for the secondary cost; that is the transformers, etc., The Commission pays for the cost of the primary lines.

THE CHAIRMAN: How is that repaid?

A. The Township will issue debentures on a 20 year basis and that will be repaid out of the rates.

THE CHAIRMAN: That will be a charge against the special property paid out of the taxes?

A. No. It is a charge on the special property if they do not pay their bills. The consumer signs a contract to pay at a certain cost. The bills are submitted for three months. If he does not pay his bills, the Act states that it may be put on the TAX bill a and collected out of the taxes.

THE CHAIRMAN: The Hydro pays the Council sufficient to take care of the debenture payments?

A. That works alright for certain lines. The construction of lines, under the 1911 Act, followed the path of least resistance. Thus, consumers located close to any center of power, could get together and apply for service and get service at cost but when a consumer

was miles away from the source of supply and asked for service and there was no one else between his farm and the center of distribution, he could not get service at a reasonable cost and the whole scheme was not applicable to that district. The scheme went on until we saw that it had to be revised if the farmers as a whole were going to get service. Large centers of distribution ----

THE CHAIRMAN: Where is your centre for Norwich?

A. Norwich Village. As you will see from the maps, the sub-stations on our lines have no particular reference to the boundaries of the Townships. Villages may be located at a crossroads and parts of them in different townships, so , if we had to consider townships as units, as we had up to that time, we would have had our units located without reference to supplying power economically. You should have your centre of distribution located conveniently fro the area which you serve, otherwise you may be off to one corner of the Township or district. So, we tried to devise some other scheme, considering areas instead of townships, so as to utilize the centres we have in operation supplying the urban municipalities. With that in view, the engineers recommended that, instead of considering townships we should consider districts. For instance, around London on the map is a district in red which we can supply economically from London. Anything in the green district around Strathroy, we can supply economically from Strathroy. The engineers recommended, after a great deal of study and visits to farmers in many districts numbering some thousands and from which engineers who has lived on a farms themselves and know considerable about whether they would use power or would want just light, were recommending that current should be supplied in certain districts without reference to township lines, except where the characteristics of the country were such as to make the township O.K. for a district and might be considered as such, taking in a part of another township. That was the case, I think, in Niagara Township and some others but to economically supply power to the farmers, it was necessary to consider some other area than townships and it was recommended and approved by the Commission that we consider, not townships, but rural power districts as units in connection with rural power supply. These districts are determined arbitrarily by the Commission on the basis of recommendations and according to the revision of the act. These boundaries are to be approved by the Township forming part of the district. Now, then, having determined that power would be supplied in rural power districts and I might say that the Act of 1920 has sanctioned that, now that power can be supplied in rural districts to farms. Our men go out, if we get a request from one or more petitioners in a district, as soon as possible after the receipt of the request, and investigate the power requirements of that particular district and see the Township Council of that particular part of the district and see whether or not there is a general demand for power. If there is, we hold public meetings and explain at those meetings, to the farmers as much as we can about rural power supply. We explain what they can do with the power; what the power will cost them; what the motors cost; what the wire costs; what the appliances cost; also what it will cost them for particular classes of service. In speaking of

[illegible] wholesale away from the source of supply and [illegible] for serving [illegible] was not applicable to this district. The address went on [illegible]

THE CHAIRMAN: Where is your centre for Norwich?

[illegible] electricity referred to the [illegible] [illegible] be located at a crossroads and [illegible] [illegible] so. If we had at Chandler township [illegible] to that site, we would have to run our units [illegible] the area which you serve, otherwise you may be off to the corner of the township or district. So, we tried to devise some other scheme to minimize areas inside of townships, so as to utilize the centre we have in operation serving the urban municipalities. With that in view, we carried reconnaissance work, based on considering some [illegible] the map is a district in red which we can supply economically from [illegible]. Applying in the rural district around Norwich, we can supply economically, and [illegible]. The [illegible] reconnaissance, after a great deal of study and visits to farmers in many districts [illegible] a very thoroughly and very conscientiously about whether they would [illegible] should be supplied in Norfolk district without refusing to [illegible] able time, where the electrification of the country was such [illegible] be made the township O.K. for a district and might be considered [illegible] such. Speaking in a part of another township. That was the case, I think, in Kingston township and some others but so economically supply power to the farmers, it was necessary to consider some other [illegible] township and it was recommended and approved by the commission that we construct, not township, but rural power districts as units in connection with rural power supply. These districts are [illegible] ambiently by the commission on the basis of recommendations made according to the revision of the act. These boundaries are to be approved by the township councils part of the district.

[illegible]

classes of service, different farmers or rural residents have different uses for current. A man with a large farm will, perhaps require a motor while a man with a small farm may perhaps, want to use it for milking, while a resident requires simply light. So, on this basis, we have divided rural consumers into different classes and have prepared a letter to hand out at these public meetings and to send out in reply to inquiries as to our rates. (Copies left for the Commissioners.)

You will notice on page 2.

"Users of power in your township will be required to sign a contract with the Township, and may choose, with certain limitations, classes of service outlined as follows;
Class 1 - Hamlet service etc.,
1-A - Service to residences, etc.,
1-B- Service to residences with more than six lighting outlets, etc.,
1-C- Service to residences with electric range, etc."
and so forth.

On pages 2, 3 and 4, we have set out a detailed explanation of what each class consists of and what power each class of service can use. Take the first class "Hamlet" users at a crossroads and with three or four houses, where you can supply a number from one transformer, this doesnot cost as much as one isolated user, away off from other consumers. We have split these hamlet users into three classes. One man might want to instal a range. It is not fair that he should pay the same as the man who wants only light, so his charge is higher. Class 2 -- a house located on a high road where a line runs past it. That man is isolated but, if he is not a farmer and cannot use it for power, we give him the rate similar to the hamlet rate.

Class 3 - A consumer can use a range or a 3 H.P. motor but not both at one time.

Class 4 - Where a man can use up to 5 H.P. or a range, either one but not both at one time.

Class 5 - Can use up to 5 H.P. with a three phase service (Class 4 was single phase) A three phase motor would cost less than for a single phase.

Class 6 - 5 H.P. and electric range at one time on his motor, or 10 H.P. without range.

Class 7 - Power for three-phase motor from 10-20 H.P. and electric range.

Class 8 - Syndicate outfits. Any of the foregoing classes may join in the use of a syndicate outfit provided the summation of their relative class demand ratings is equal to the K.W. capacity of the syndicate.

The rural contracts are sub-divided into various classes, depending on the uses which they make of the s rvice. The man who uses a lot of power pays more than the man who uses only a small

Tom will motion on page 8.

amount of power. Now to get at the rates that we have to charge; before we can quote a rate or sign a contract we have to establish a rate. There is a clause in the contract which specifically states that these rates may be revised annually to cost. You may think that a man may sign for power and next year the rates may be doubled. This might have been so under the 1911 arrangement but it cannot be the same now. We must get three Class 3 consumers on a line before we can build that line.

THE CHAIRMAN: Does the farmer undertake to take a minimum amount for a specified time?

A. Yes.

THE CHAIRMAN: Suppose he died?

A. It stands as a mortagage upon the property.

THE CHAIRMAN: Must he then consider it as an asset?

COMMISSIONER HANEY: What is the service charge per mile?

A. We estimate first what a mile of line will cost. Perhaps we build a single phase line with a certain size wire; a three phase line; an underground line with single phase; an underground line with three phase; Underground lines cost less than overhead. We carry the wire in lead-covered copper cable buried about 12 or 18 inches deep.

THE CHAIRMAN: When an ice storm does damage, how do you pay for repairs?

A. That is taken care of in our contingency fund. We figure out how much a mile of line will cost on the basis of labour. We figure three-phase, single phase both underground and overhead. When we start to build a rural line, when we have enough contracts, our man sees the Reeve or Clerk or whatever official is in charge of the line and tells him how this will be handled. It will all have been explained at the Meeting but our man tells him that, on a certain date, we will commence and we would like to use local labour, and would like the farmers to do all they can, outside of expert labour which requires expert men to do it. We find out the rate of pay for teams and for men and, whatever that rate is, th that is the rate which we advise the Township representative that we will pay to any farmers who work on the construction of the line.

THE CHAIRMAN: Do they do most of the work?

A. In some cases they do. In some cases they do not. In some case they holler like the dickens. We try to give them the standard rate of pay as it is more expensive to bring men in from other sections. In many cases we have held up the work when they could not supply men, as for instance, during harvest time or seeding time, etc., So the farmers are given a chance to build their lines themselves at the standard rates of pay for teams and labour. So, if a farmer does not do any work but comes on later, there is no disadvantage to the men who helped to construct the line as they

have been paid for their labour. So we start with three farmers per mile.

THE CHAIRMAN: In some cases you have more than three per mile. In Norwich, for instance, you have more. Are they not among the largest consumers of power and the first.

A. Yes. They are among the first and most satisfactory.

COMMISSIONER R.A. ROSS: Leaving out Oxford County!

(General amusement.)

A. The Commission will not build a line unless they have the equivalent of three Class 3 consumers per mile. Each Class 3 service is considered as a demand of 3 K.W. We put up a 3 K.W. transformer to serve that particular customer.

THE CHAIRMAN: That means that you cannot get more than that?

A. No. We have to start out with some arbitrary basis of allocating our charges among the various classes of consumers so our scheme is maximum demand.

THE CHAIRMAN: What is a 3 K.W. transformer?

A. That is a transformer that will supply approximately 4 H.P. That is the limit.

THE CHAIRMAN: How much would an electric stove take?

A. If all the elements were on, it might take 6 K.W. but you very seldom have all of the elements on 3 K.W. would be almost the outside. I am explaining this in a little detail as it is important for you to know why the rates will never increase. The rates on which the farmers sign up now will never go up. They may come down. The line is not constructed until we have the equivalent of three Class 3 services per mile. These three will give us sufficient revenue to meet all charges on the line, whether the farmer takes power or not, until the debentures are wiped out and he pays for his power by meter.

THE CHAIRMAN: Suppose the cost of power should go up?

A. There might be some slight increase but we try to be conservative and make the rate high at first.

THE CHAIRMAN: If a man comes in after the financing has been done, does he have to pay anything on the cost of the construction.

A. No. The scheme will carry on as a continuous proposition. It will not stop at the end of twenty years. The pioneer has no advantage. We always have a continuous plant; at the end of twenty years we will have our lines in good shape.

THE CHAIRMAN: Q. The sinking fund will continue forever?

A. The sinking fund will only continue until the actual charges are paid off. The contracts are for twenty years and the sinking fund will have been paid off by that time.

THE CHAIRMAN: If a man came in at the end of twenty years, he would not have to pay any of that? It is always growing. Suppose he came in on the part of the line that was constructed twenty years before, would he have to contribute any of the expenses of that line?

A. Yes, because the entire area is considered as one district and they all pay the same.

COMMISSIONER HANEY: There is a recasting of the rates at the end of twenty years?

A. There would be drop in the rates. The sinking fund would gradually come down as each particular branch was paid off.

THE CHAIRMAN: The original promoters still have to contribute in connection with the expenses of that line? If I went in at first and began to contribute to the construction, I should object to paying the expenses after my twenty years were up.

A. If you considered only that particular district but what you consider ----

COMMISSIONER R.A. ROSS: Every unit reduces the cost to you.

COMMISSIONER HANEY: It is based on the cost of so much a mile?

A. Yes. It means that you have so much capital and, if you have more customers to pay the fixed charges the cost per customer goes down.

MR. WEGENAST: The capital increases as fast as the income, does it not?

A. No. Not exactly. If the lines on the highways are not increased that would not go up.

MR. WEGENAST: The secondary lines are more expensive.

A. We have to have three Class 3 consumers (3 K.W.) or the equivalent. Class 2 is 1 K.W. so we would have to have nine Class 2 to make up three Class 3. The Hamlet service Class A. is only one-hald K.W. We would have to have sig teen of those. Class 7, we would have to have fifteen per mile. They go in and take a share of the cost along with the farmers. One of the objections from the farmers is "I do not want power. I only want light." You give light to the hamlet at a certain service charge - say $22. for sixty cycle system. For class 1 it is $22.72. The service charge to

a farm, Class C. is $57.75. It is hard for us to explain to the farmer just why he should pay more than the man in the hamlet but we explain it in this way. If a farmer wants service we have to build a line right across the stretch of his farm and that is built especially for him. He has a frontage of one hundred acres on the highway which keeps other consumers away. The man in the hamlet has other consumers near and not much frontage and we do not have to build a long line to serve him. It depends on the length of line we have to build to serve him and that is the basis on which our service charge is made. The farmer will have a special transformer erected to supply him alone. He is too far away from others to use the same transformer. This costs $150. or more according to size. We have to have a higher voltage from the lines on the highways.

MR. WEGENAST: How do you draw the line between the farmer and the villager?

A. If a man has fifty acres he is a farmer. If he has less he is not a farmer. That is arbitrary. In fruit districts we say a man is a farmer if he has ten acres.

MR. WEGENAST I have in mind a village of eight houses; in one corner a fifty acre farm, the house on which is the nearest the corner and is the most central. The barn is close to it. Would you deny that many his privilege?

A. Not if he is under fifty acres and has a barn and can make use of his current. He would be considered as a farmer. If we have sufficient contracts signed to build a certain line on the basis of the estimates we have made and if we build the line on the basis on which the rates are made, the rates can never go up. If more farmers go on and give us more than three consumers per mile, the rates must necessarily drop. Our rates on the start are the maximum and cannot be increased as far as the service charge is concerned. As far as the cost of power is concerned, a farmer takes his chance on the cost going up and down the same as they must in the village. Each of these districts is considered as a unit. We keep a separate set of books for each rural district and supply power the same as to the City.

THE CHAIRMAN: Suppose some sections could be served more conveniently from a plant other than Hydro, such as the Dominion Power and Transmission Company at Oakville.

A. That plant has come up and if Oakville and that district can be supplied more economically by the purchase of power from the Dominion Power and Transmission Company, the Commission's attitude is that they will help Oakville as much as possible to get power on the best terms. At present we have no lines near Oakville from which we could get power.

COMMISSIONER J.A. ROSS: Is it not a fact that your business great-

ly exceeds what you are able to take care of and therefore you are susceptible to this proposition of letting the other fellow do it?

A. Not just now. A year ago the demand for meetings and rural power was much greater than it is now. We account for this, rightly or wrongly, by the criticism that the Commission has received from various sources and the lack of confidence that has resulted.

COMMISSIONER J.A. ROSS: Have you not taken on this business and cleaned up the field? Is that not the reason?

A. No. The demands for power a year ago were much greater than they are now and our men were busy attending meetings. We had forty (40) meetings then to two (2) now. The cost has gone down since then.

THE CHAIRMAN:: I was told that the cost was so high that they decided not to go on with it, at one meeting.

A. It has dropped somewhat within the last year because labour and copper have dropped.

THE CHAIRMAN: What has the farmer on the average rural line to pay per h.p.

A. In sending out the circular letters we fill in page 6. To the average farmer, with a 3 H.P. motor his service will run between $80 and $130 for his total service for 3 H.P. and his total bills will run between $80 and $130 per year for the way he would use it, that is for power and lighting, and range. That is cheaper than I am getting current in the City, with a range - not Hydro - . This charge is not exorbitant but is very fair, I think, considering the area that is to be served. He can do his pumping, run his cream separator and anything else that can be done up to 3 H.P. He cannot run his threshing machine but a number can form a syndicate - we have a number on our lines - a half dozen or more consumers will buy an outfit with a couple of transformers on one truck and a motor on the other and they pull the motor up in front of the barn, like an engine, connect on your belt and start to thresh.

MR. WEGENAST Is there any case where you buy from a private plant and sell to the rural district? As in ------

A. Not yet.

MR. WEGENAST: Did you not have suggestions and why did you turn them down.

A. We did not turn them down but we were unable to get sufficient contracts to warrant going on with the proposition.

MR. WEGENAST: My information is that you did not want to take it

up but referred them to the Company.

A. No, we took the matter up and explained how they could get power. We gave them standard rates and told them, if sufficient contracts were secured, we would build lines.

There are lots of details but I have tried to give you a summary of how we arrive at the rates; how the consumers are divided into classes, etc., We have today about 5500 rural contracts signed - individual contracts, with consumers in about sixty townships.- In some cases, we have not enough contracts signed on a line to enable us to go ahead and build that line; otherwise we would get lines built and would not have sufficient revenue to meet our charges.

MR. FRANCIS: I understand that the Commission deals directly with individual consumers in this case?

A. Yes. The consumer signs a contract with the Township; the township signs a contract with the H.E.P.C. to operate those contracts and all of these systems in the rural districts are operated from the Toronto office. There are representatives in the field. Where we have a very small district as _____ just South of Collingwood, we make an arrangement with the Collingwood man to handle the district for us. He reads the meter and does the billing until the district becomes large enough so that we can hire a man and open and office to handle that district as a unit. Another case - Saltfleet, just east of Hamilton, we have over six hundred contracts signed, and all of them are being served, within the last year. We have four or five hundred more in Grimsby and before the next year or two that entire territory, between Hamilton and Niagara Falls, will be supplied with power. Grimsby bills are paid in Stoney Creek. The man in Stoney Creek handles three or four rural districts. We may open another office in Grimsby or they may pay their bills to the Bank.

THE CHAIRMAN: In Norwich, they pay in the village, I suppose?

A. That has been operated by the Village Superintendent and they pay right in Norwich. We intend to open up places where they can pay their bills without going too far away. We can often arrange with the local Bank in small places. They are glad to handle the collections because they bring people into the Bank.

THE CHAIRMAN: I suppose your policy is to increase power and open up opportunities for a greater sale of power.

A. Yes. The matter of power supply to rural districts is important to the small urban centres, where the cost of power is up to $35 or $40 and even $90 per h.p. Rural power supply is going to help these small centres very materially.

THE CHAIRMAN: Wasdell's is helping to pull you out of the hole there.

A. That has been of very material assistance to us.

MR. WEGENAST: A good deal of this development depends on the enterprise of your own staff, does it not? It is not a matter of the farmers walking into your office?

A. Up to the present I have had all the work that my staff could handle. They have only been handling those that were hollering for power the loudest.

COMMISSIONER J.A. ROSS: Increase your staff.

A. If we do we must charge our expenses somewhere and Mr. Guilfoyle is very particular where we put those expenses.

COMMISSIONER J.A. ROSS: Don't let an auditor stand in your way.

A. I would not say that but the Government would have to increase its appropriation.

COMMISSIONER J.A. ROSS: I do not see why this is not a legitimate charge. If you have three farmers in a mile and three more come in, it cuts the cost.

A. It does where we have existing lines but in new districts which we want to open up, if we have not a fund, to which we can charge the expenses, we are at a loss in case the customers did not come on. We have quite a lot of that and the lack of money, or a place to charge the time of men, to get out in the field and explain the matter of power to the farmers. In any district where the farmers have had power for any length of time, we have no trouble in getting them to sign contracts because one tells another what he can do with his power and the other will say "I want the same conveniences that you have." but take where they have had no rural service. There is no demand b cause they do not know the uses of it. They have the same uses for it but do not understand that they can use it. They look at the annual charge and say "That's a lot of money. The hired man can do the work by hand and save the price of power." but, wherever they know the uses, we have a little trouble in getting them to sign contracts.

COMMISSIONER J.A. ROSS: In districts where you have lines is there not a large unsatisfied demand?

A. Yes, but up to a year ago they were coming along very fast and suddenly, within two months, the demand stopped and I find, through being in touch with them, it is on account of the adverse criticism of the Commission and they sit back and say "The legislation is going to be changed and the Government will give a bigger bonus and we will wait."

THE CHAIRMAN: You are finding _____

A. Yes. That has caused them to sit back and say "We will wait." But it is coming on fast enough for us just now for building.

THE CHAIRMAN: We will have to restore harmony.

Mr. Gaby told me three months ago that there were thousands of applications unfilled that you could not supply.

A. We have them still but we would have had ten thousand.

THE CHAIRMAN: You are not wanting business? You have all you can take care off?

A. It has not cut down the number of consumers that we could have built lines to, because we are building as fast as we can. According to the Act the Government can pay up to 50% of the cost of the primary lines to rural consumer - that is lines constructed on a highway - so, when we get sufficient contracts signed in any particular district to warrant the construction of a line, we prepare an estimate of the cost and forward it to the Government and ask for their approval by Order-in-Council.

THE CHAIRMAN: That should make a great difference.

A. Not as much as one would think. Suppose a primary lines costs $1200 a mile and suppose three farmers are on that line and suppose interest at 6% per year. Your interest on your $1200 would be $72.00.

THE CHAIRMAN: That seems high. Does it include transformers?

A. No. It is the primary line only.

THE CHAIRMAN: How does the cost of the transmission line compare?

A. An overhead line will cost about $1200 and an underground line will cost a little over $800.

THE CHAIRMAN : Will it be as lasting?

A. I think so.

THE CHAIRMAN: Then it would be wise to construct underground?

A. Yes. A three-phase line will cost slightly more underground but in some cases we have to construct underground on account of shade trees, etc.,

MR. NEWMARCH: What is the life of an underground line?

A. It is hard to say definitely but at least 20 years.

THE CHAIRMAN: Where were they first used? In the United States?

A. They have been used for years in construction. Nearly every distribution cable has them but they only put them in conduit for convenience in getting at them without tearing up the streets. For several years the different municipalities have put in street lighting service with underground lines. In Windsor fifty miles

of ornamental lighting was put in covered with an underground iron sheath. The cable we lay in the country has no protection at all. It is just lead covered with jute.

COMMISSIONER HANNY: In your charge for service do you include a provision to pay off the Government?

A. Yes. The sinking fund is in there for the 50% the Government will pay outright. The 50% of the cost of the primary lines is a gift and we make no provision for that. It is a gift straight from the Province.

COMMISSIONER HANNY: As a matter of fact if your primary line costs $1200 and the Government pays half, it only costs $600, so the actual amount the farmers gain is the amount of interest o half the line, which figures out about 20% of his entire bill.

A. Up to date, the Commission have approved the construction of primary lines amounting to $583,620 (?) 50% of which the Government will have to pay and which they have approved. These figures are estimated and will have to be adjusted to cost at the end of the year. When the actual construction cost has been obtained an adjustment will be made with the Government on the basis of actual cost but we have to send the estimates in order to get their approval. As we get sufficient contracts to go ahead with these lines, we periodically send in additional requests for more money, setting forth the number of consumers, the number of lines, the district in which it is to be situated, the total cost of primary construction and of secondary construction and the date approved by the Commission.

THE CHAIRMAN: Are these grants made to provide lines?

A. I believe not. It must come under the Hydro as trustee for the Government.

THE CHAIRMAN: If youtook over a private line, would the grant come in?

A. That is a matter of policy to be decided by the Government. I would think it would be considered as if we had constructed it. At present we have applied for funds to supply power to something over three thousand rural consumers.

COMMISSIONER HANNY: How have your costs worked out in comparison with your estimates?

A. So far the costs have invariably been lower than the estimates.

COMMISSIONER HANNY: What do you do with the money that is left?

A. Hold it until the end of the year and then hand it back to the Government as the Act specified. The first period of adjustment has not yet come but will be at the end of this year.

COMMISSIONER HANEY: When the Order-in-Council comes does the Government then pay you?

A. They advance monies to us. I might sa that, up to the present time, the actual amount has not been advanced to us.

In getting money from the Government we do not get a specific amount, earmarked for any specific purpose. Suppose we asked the Government for One million dollars. The Government would advance that million out of the general funds, although the Act specifically states, I believe that that money shall be borrowed by the Government for that particular purpose. I understand, however, thatthe money is just taken out of the general fund and handed over to us and not earmarked in any way, although it may be borrowed on a short time arrangement five or ten years - at the end of that time the Government must pay it back and while our sinking fund is deferred for the first five ye rs for new municipalities, at the end of thirty years, if money was borrowed specifically for us and at the end of thirty years the money was not in, the Government simply borrows more money to meet it for another five years, so they are not out at all.

COMMISSIONER HANEY: In connection with rural investments do you take advantage of the five years?

A. No. That has not come up. There is no deferment of any sinking fund.

COMMISSIONER R.A. ROSS: Are any of your rural lines going behind say, under the 1911 dispensation?

A. Yes. Under the 1911 arrangement we knew very little about making rural rates. We knew little about the uses the farmer would make of power and, in some cases, the rates as quoted were too low and did not cover the cost and it has been necessary to increase these rates somewhat. One district where this applies is North-west of Whitby as well as a number of other districts - one is Breslau. In Grantham township the rates were increased a little and it has been necessary to increase the old rates slightly in order to meet the cost.

COMMISSIONER R.A. ROSS: Under the 1911 township arrangement, townships received no bonus (?) from the Government on 50% of its lines. Have you ever applied for this?

A. Application has been made. The Commission recommended that thae 50% bonus should be retoractive and I understand that legislation, at the last Session, took care of this.

COMMISSIONER R.A. ROSS: Bringing them under the same statutes a the more recent ones.

A. Yes. It did not seem fair that the pioneer should pay all of the cost of the primary lines and the later ones only pay 50%.

THE CHAIRMAN: you told mr. Ross that some wer running behind.

Is that still the case?

A. They are catching up. The increase in rat s will take care of the arrears.

COMMISSIONER R.A.ROSS: There will always be a sore spot if you do not put those people on the same basis.

CHAIRMAN: If you did, you would be able to reduce the rates or at least wipe out the deficit.

A. Probably, although you will understand that the rates that were quoted them were on the basis of one particular section of line, perhaps five miles long, whereas if we put that line in a rural power district, under this new scheme, those rates might still have to go up.

CHAIRMAN: Those lines, built in 1911, only cost about half as much as the lines being built now.

A. Yes, about 60% of what they cost now.

CHAIRMAN: And this aid from the Government has been brought about by the increased cost?

COMMISSIONER J.A. ROSS: You spoke of having one man in the Grimsby District do repair work, collecting, etc., Does he also read the meters?

A. Yes, he has charge o- with a girl in the office and another man outside.

COMMISSIONER J.A. Ross. The responsibility of assessing and collecting is on the one man?

A. No. He works directly under my staff. My district man goes out and he works directly under his supervision. We try to combine two or three districts in order to pay more and thus get a good man.

COMMISSIONER J.A. ROSS: Your man checks back? Is there not an opportunity for looseness?

A. Our man checks him up every week, and he has to account for all his collections.

COMMISSIONER J.A. ROSS: The fundamental point is the readings.

A. If you make a mistake in a meter one month, you find it the next month.

COMMISSIONER J.A. ROSS: The meter might be running slow and your inspector might wink at it.

A. The man who checks the bills would see whether the con-

sumer's consumption was low or not. He reads the meters the billing is done in our Toronto Office. All of these rural consumers are billed from Toronto but the meters are read by the man in the field, who sends in a slip and makes certain inspections at the time he reads the meters.

COMMISSIONER J.A. ROSS: You do not interchange your inspectors?

A. We have not considered that, so far. It might be advisable sometimes. We might take it up later.

MR. WEGENAST: The system at Beachville was one of the first, was it not?

A. There was a small system at Beachville.

MR. WEGENAST: Is this handled by Norwich?

A. No. Beachville is handled by itself. We have one or two customers there.

MR. WEGENAST: There were more than that at first, were there not?

MR. J. No. We never had many out at Beachville.

MR. WEGENAST Is the Village of Beachville a hamlet?

A. No. It is a police village, considered as an urban municipality.

MR. WEGENAST: In some cases you supply farmers from police villages and other municipalities. What is the arrangement in regard to the lines?

A. In some cases power is supplied to a few isolated consumers located beyond the limits of the municipality- in some cases farmers. In those cases, the farmer has spent the money for the line up to the edge of the municipality and he gets power at the village rate. There are few of those. The understanding is that, where there is a rural line established, the farmer will come in and take a power at the rural rate.

Mr. WEGENAST: Is there any objection to supplying farmers from rural lines?

A. If a farmer spends money for the line up to the edge of the village there is no objection.

MR. WEGENAST: How are you supplying Huttonville?

A. We do not supply it. That is supplied by the local company.

MR. WEGENAST: They are buying power from you now.

A. They are buying power from us but he is not operating. He had a water power plant and supplied a number of consumers but his dam went out of business and he took power from us at Brampton and took it out to Huttonville but his line got out of order and caused trouble to the Brampton service and they told him that, unless he fixed up his line they would have to discontinue his service. They are getting no service whatever in Huttonville.

COMMISSIONER J.A. ROSS: You speak in the service cost, with regard to power cost, of a promotion of business charge of a certain percentage in Dundas?

A. The promotion charge was a certain proportion of that.

COMMISSIONER J.A. ROSS: What kind of promotion would you carry on under that?

A. Promotion of business - advertising - having a man solicit business.

A. Not very large. I cannot say off hand. We merely carry on that Department as a convenience for those municipalities who cannot help themselves. Toronto buy their own stuff; practically all of the large cities buy their own; we only buy, as a rule, for the smaller ones, who cannot afford to keep capable men and one or two larger places who find it more economical.

COMMISSIONER J.A. ROSS: Would you not get better prices if you bought for the whole chain and redistributed?

A. Yes, But, in the end, it is not, as I see it, a good proposition for us to buy large quantities of materials in bulk in order to break the market. It always comes back at you. Just as soon as you beat down the price by buying, for instance, ten thousand meters from one Company, other Companies do not get any orders for so long that they are down and out and the next time we want to place an order those Companies are not in a position to tender and the other fellow boosts his price.

COMMISSIONER J.A. ROSS: Do you aim to handle all standard lines of stoves, etc.,?

A. Yes.

COMMISSIONER J.A. ROSS: In this way you do not give any particular plant an edge on any other.

A. Yes.

MR. ARGINEAST: What becomes of the profits?

A. They go back to the municipalities in reduction of power bills.

COMMISSIONER J.A. ROSS: They do not reduce your overhead?

MR. GUILFOYLE: Pardon me. The big answer is that it goes into the profits of that Department. It is pretty nearly a cost basis.

COMMISSIONER J.A. ROSS: If you make a large enough profit to permit of a certain amount being applied to advertising, you really have an advertising account. That is applied to domestic utilities; it is not applied to any other Department of the Hydro?

A. To date it has not been.

MR. GUILFOYLE: It is made to stand any advertising of appliances.

MR. HANEY: Do you do any advertising in the newspapers?

A. We have done some in connection with lamps, but I might explain why it is necessary for us to have a Sales Department. We had been buying our lamps from a certain Company, under a certain specification. We have a labratory and can test lamps and know what we are getting. The general tendency has been for lamp manufacturers, especially in the United States - and on this side of the line they follow American practice pretty closely- to cut down the life of the lampand increase its efficiency. As you increase the efficiency of the lamp, it so happens that you decrease the life and the manufacturers have been increasing the lamp efficiency at the expense of the life; consequently, they are getting more business and we are getting more light but there is a point where a saving in light does not offset the expense the expense in lamps and if you have to pay $2 for lamps in order to pay $1 for light, on account of the short life of your lamps -- especially in this province where the cost of light is low - it does not pay. Short life lamps, or high efficiency lamps are alright in New York, where they pay high rates for power but in Toronto, where we pay 2¢ per k.w. hour, the saving in light is not as important as the saving in lamps, so the thing got to such a stage that it was necessary for the Commission to ask for new tenders. We used to get lamps, before the war, which gave us upwards of 3000 hours. The other Companies, who are controlled by a trust, were cutting down the life and bringing up the efficiency until the lamps were so bad that people were disgusted. Why you would buy a lamp new and in 24 hours it was gone. In order to get good lamps, the Commission asked the Lamp Companies to bid on a lamp of a certain specification which we drew up and submitted. We got replies from all of the Companies that they would not build that kind of a lamp. They even came to my office and told me we did not know what we wanted.

THE CHAIRMAN: Did you dispute that statement.

A. Somewhat.

MR. HENRY: Do you do any advertising in the newspaper?

A. To date it has not been.

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COMMISSIONER R.A. ROSS: Who makes the lamp replacement? The customer?

A. Yes. We finally did get a Company, but we had to go to Montreal for it, who are making lamps to our specifications and the customers are satisfied.

MR. HANEY: What are your specifications?

A. 1500 hours. That was one point on which it was necessary for the Commission to take concerted action and buy a large number of lamps in order to get what the consumers want.

THE CHAIRMAN: What manufacturing do you do yourselves.

A. Very little. Merely little connecting switches or something we cannot get outside. You might say that we do no manufacturing. Any large distributing Company would do the manufacturing we do. Merely special devices that have to be made to special specifications.

MR. WEGENAST: When you speak of Hydro lamps do you mean those made by the Montreal concern?

A. Yes. They are stamped with our name.

MR. WEGENAST: Were not the Condor Company willing to make these for you?

A. I do not think, at the time the specifications were sent out, they were able to make the lamps.

MR. WEGENAST: Did you not have a controversy with them, and with the City of Toronto, of some heat?

A. It was discussed but I do not know with how much heat.

COMMISSIONER J.A. ROSS: In your trading account what are the main items you sell to municipalities?

A. Lamps, meters, transformers, wire, poles for the distribution system. For re-sale to customers stoves, irons, toasters, washing machines, etc.,

COMMISSIONER J.A. ROSS: You buy everything?

A. Yes.

COMMISSIONER J.A. ROSS: And you figure a margin of profit to cover your overhead and in your overhead there is an item of advertising?

A. Very little advertising.

COMMISSIONER J.A. ROSS: What percentage?

A. Not one per cent.

COMMISSIONER R.A. ROSS: Do the large Companies come to you, when making contracts with others, and ask for your price and --

THE CHAIRMAN: Is there not a trade price set by the manufacturers?

A. Pretty much but they all compete. If you are buying a range you can get different makes - Westinghouse McClary, Moffatt, etc., but each one has its own price. All of these Companies will sell to different municipalities at the same figure - at least we presume at the same figure - if they take a certain quantity. It depends on the quanitity they take and they will almost all cut prices any time. The Commission does not make a practice of cutting the standard retail price. You can go into any city, into any local shop, and you cany buy the same article that you can get from the Hydro shop. We do not try to do the other fellow out of business. the more dealers we have in a town, the more appliances we sell and we do not care who sells the appliances as long as they get into the hands of the consumers.

COMMISSIONER J.A. ROSS: Why do you establish a local Hydro shop?

A. It is not a matter of competition. It is because the private dealer does not function in getting the Hydro into the consumers' hands. They have them there but do not advertise.

COMMISSIONER J.A. ROSS: Your sole object is efficiency?

A. Yes, In Stratford, where they have a Hydro shop, they did, within the last seven months, over $60,000 worth of business in the sale of appliances to consumers and all the other local dealers have sold more than they ever sold in the same time, because the local Hydro advertised.

COMMISSIONER J.A. ROSS: And yet he is opposed to you.

A. Because he does not understand our idea. He can buy stuff a and sell to the consumer at the same price as the Hydro.

COMMISSIONER J.A. ROSS: Is it not a fact that the prospective consumer thinks in terms of Hydro and goes to your shop in preference to a private dealer?

A. In general - Yes. But it increases the sales that are made by the other dealers.

THE CHAIRMAN: It acts both ways, I suppose.

COMMISSIONER J.A. ROSS: In manyother cases, Tom, Dick or Harry, who is established in the town, is a personal friend and they buy from him.

A. Yes.

THE CHAIRMAN: There would be a difference of opinion as to whether it hurts or helps the local man.

A. Yes.

THE CHAIRMAN: There has been a desire expressed at Headquarters for more money for propaganda purposes. You are aware that, some months ago, you called together the manufacturers and advised them that you proposed to go into manufacturing yourselves, in order that you might have a fund for advertising?

A. No. The jobbers and dealers were called together and told that we wanted to start an advertising campaign to increase the use of appliances and we asked them if they would be willing to contribute a certain percentage on the appliances they sold to increase the general use of stoves, etc.,

THE CHAIRMAN: If you look in your files you will find a letter from them stating that they thought it wise to enter into a joint campaign and your reply that you did not care to do so.

A. We did get a letter from them, suggesting that some cooperative scheme be entered into but that was taken up and the Commission decided that it was not feasible at that time.

THE CHAIRMAN: They did not suggest any particular scheme. I think they are prepared to enter very heartily into a joint propaganda scheme.

A. We should be very glad to have them do so.

MR. WEGENAST: Apart from lamps, are there any other appliances on which you place your stamp.

A. We had an iron. We still have some left but we are not having any more made at the present time.

MR. WEGENAST: What was the reason for dropping that?

A. We found we could get irons at a reasonable figure from a great many manufacturers. At first the idea was to get out a cheap iron to encourage people to use irons. Now, people will use irons no matter what they cost and it is not necessary for us to place an order for a large number in order to get cheap irons.

CHAIRMAN: Do not a great many manufacturers come to you for approval of their appliances?

A. They must do this in order to sell them. It is necessary, for the safety of the public, to see that they are properly insulated, as regards fire hazard, etc.,

(MR. JEFFREY THEN RETIRED).

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